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TELEGRAPHIC ADDRESS—LANCET, LONDON

[ONE HUNDRED AND SIXTY PAGES.]

TELEPHONE NUMBER—4366 GERRARD

No. XVIII. of Vol. I., 1907.
No. 4366. Vol. CLXXII.

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PROFESSOR OF PHYSIOLOGY, KING'S COLLEGE, LONDON.

## LECTURE I.

*Delivered on April 29th.*

MR. PRESIDENT AND FELLOWS,—I have first to thank the College for the honour conferred upon me in selecting me as the Oliver-Sharpey lecturer for the present year. The College has always recognised, from the days of Harvey onwards, that scientific medicine must be grounded on physiological knowledge. The founder of this lectureship has exemplified this precept in his own lifework, and Sharpey, the great master whom the lectureship commemorates, always recognised the importance of physiology as the institutes of medicine.

Many years ago, when I was a first year's student at University College, I remember Sharpey's commanding figure; for, though he had then relinquished his professorship, he continued to haunt the laboratory which had been the scene of his teaching and of his investigations. I well recollect the sad day on which his remains started from the precincts of University College to their last resting place. His name still lives not only in the memory of those whom he inspired but will be remembered in relation to his discoveries and is commemorated at his college by the foundation of the Sharpey Scholarship. Being myself one of the early Sharpey scholars, the invitation to deliver these lecture was one which was especially acceptable, and I can only trust that what I have to say will be considered worthy both of the great memory to which I have alluded as well as of the high traditions of this College.

In the days of Harvey the subject of physiological chemistry, chemical physiology, or bio-chemistry, as some prefer to term it, did not exist. The late Sir Michael Foster in his "History of Physiology," when speaking of Vesalius, said: "The great anatomist would no doubt have made use of his bitterest sarcasms had someone assured him that the fantastic school which was busy with occult secrets, and had hopes of turning dross into gold, would one day join hands in the investigation of the problems of life with the exact and clear anatomy so dear to him." Almost the same words might be used in reference to Harvey's attitude. The scientific men of his time paid no heed to chemical learning; they ignored or even despised the beginnings of that branch of knowledge which in later years was to become one of the foundations of physiology and the mainstay of the art of medicine. It was the work of Lavoisier in France, of Mulder in Holland, and of Liebig in Germany that first placed bio-chemistry on a sure basis, but even in Sharpey's time the disciples of this branch of science might have been counted on the fingers of one hand. Sharpey himself retained to the end the anatomical conception of physiological advance. How different things are to-day; how great have been the strides made in chemical physiology and in its sister science, chemical pathology, can be realised by even a superficial survey of modern medical literature.

A few years ago, when I had the honour of delivering before this College the Croonian lectures, I selected as my subject the chemical side of nervous activity, in which I hope I was successful in showing how chemistry has invaded even the difficult country we call the nervous system. I then indicated that although some progress had been made, even in the practical applications of that knowledge, much still remained to be done. The same is true to-day, but in the few years that have elapsed since I uttered these words a little progress has been made, and it is to some of this new work that I propose to devote the present lectures. One great charm of physiology to the investigator is that fresh facts are always being discovered, and new light is thus shed on the problems of living matter. In so far as I myself have had any small share in such work, my energies have been mainly directed into a bio-chemical groove, and it is one of these questions—nerve degeneration—to which I shall devote the first of the two lectures. But bio-chemistry is not a narrow specialism, and research on such lines usually branches out in many directions; this will be illustrated by the circumstance that for the subject of my second lecture I shall take that of nerve regeneration, in which at present there is but little to be said from the chemical point of view. In relation to both of these subjects it would have been impossible to speak at all if it were not for the assistance of certain of my colleagues. Among these I would particularly mention Dr. F. W. Mott, to whose loyal coöperation and helpful advice I owe so much. Mr. Arthur Edmunds, Dr. Rosenheim, and Miss Tebb are others to whom both Mott and myself are indebted for great assistance in several portions of our conjoint work.

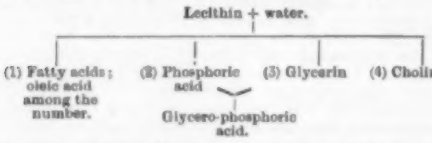
One more word of introduction, and only one, before I pass to the subject proper of my first lecture. It is impossible in our present state of knowledge to avoid controversial questions. I have to-day to deal with one and to-morrow with another. Polemics are always distasteful to me and I trust that I may deal with both without a single note of personal feeling. The proverbial disagreement among doctors is especially true of physiologists, and this is really as it ought to be. Whilst knowledge is in the making there must be divergencies of opinion, and it is only by a full and free discussion of these and by the renewed research of which criticism is the stimulus that any certainty in the way of truth can be arrived at.

### NERVE DEGENERATION.

It is more than 50 years ago that the elder Waller described the degeneration that occurs in nerve fibres which are cut off from the cells of which they are outgrowths. So complete and exact was his description of this phenomenon, now known as Wallerian degeneration, that in the intervening years but little has been added from the anatomical and histological standpoint to what he taught. But in order to understand completely the chemical transformations which lead to these anatomical appearances it is first necessary to know the chemical composition of the healthy nervous structures involved. It is just at this fundamental point that we meet with a great hiatus in knowledge. We know something of (because we can easily estimate it) the proportions between water and solids in the various districts of the nervous system. We know, further, that among the solids protein matter, and especially nucleo-protein, largely predominates, particularly in grey matter, but it is in relation to the phosphorised fatty constituents, the presence of which forms such a striking characteristic of all nervous material, that our ignorance is greatest. Thudichum did yeoman service in his attempts to unravel this problem, and the value of his investigations is only just beginning to be appreciated. His work is marred, it is true, by too hasty generalisations, and by such faults as are always seen in a new endeavour—faults which subsequent observers should be grateful for, as they profit by them and avoid them. No one who has not attempted to work at the chemistry of the brain can imagine the difficulties that meet one at every turn. In America Waldemar Koch, and Gies may be mentioned among those who have had the courage to enter this thorny field, and in my own laboratory Dr. Rosenheim and Miss Tebb are prosecuting similar researches. The phosphorised fats are not the only complex substances which are present. The crystalline monatomic alcohol called cholesterin is present in a free condition in considerable amount; this cannot be devoid of physiological moment, and yet absolutely nothing is known either of its mode of origin, its destination, or its function. Then there are complex nitrogenous glucosides, called the cerebrins or cerebrosides; here, again, although some of them have been separated in a fairly pure condition, analysed, and labelled with fantastic names, we have no certain knowledge either of their constitution or of their use. One notes with some regret the final disappearance of the substance originally termed "protagon" by Liebreich. This is one of the few materials that can be obtained in a crystalline form from nervous structures by cooling a warm alcoholic extract of brain, for instance. It has passed through many vicissitudes, being alternately regarded as a mixture and as a chemical individual. The

work of Gies in New York and that of the workers in my laboratory have, however, finally demonstrated that it has no independent existence.

It will, however, be beside my purpose to dwell too long on the lack of the knowledge we hope to obtain some day, or to go any more fully into incomplete researches now in progress. When the day arrives of perfect knowledge in such matters there may be a very different story to tell. We must, however, take things as they are, and at any rate I think we are pretty safe in taking lecithin as a type of the phosphorised fats, and we are acquainted both with its composition and with the products of its decomposition. It is present in considerable amounts in nervous tissues and it is owing to its presence that the black staining with osmic acid of the fatty sheath of nerve fibres is mainly due. The use of osmic acid as a reagent for the detection of fat depends on the presence in the fat of oleic acid and its compounds. Oleic acid is the only representative of the acrylic series of fatty acids found in the body, and all the acids of this unsaturated series possess the power of taking oxygen from osmic acid—osmium tetroxide—and so reducing it to the condition of a lower oxide which has a black colour. Fats which are compounds of acids of the acetic series—such as palmitin and stearin—do not give the reaction. When Wallerian degeneration occurs the degenerated fatty sheath is stained much more readily with osmic acid than the healthy medullary sheath. It will strike the black colour with osmic acid even in the presence of chromic salts, and it is this circumstance that has led to the adoption of a mixture of the two acids, known as Marchi's reagent, for the detection of degenerated fibres. The intense black staining which the degenerated myelin gives is due either to an increase of the oleic acid radical or more probably to a loosening of its combination with other atomic groups, so that it is able to exert its reducing action more forcibly. Lecithin is a fat which yields on hydrolytic decomposition four groups of material. They may be represented in the following simple way:—




An ordinary fat yields only two—namely, fatty acid and glycerin. The phosphoric acid obtained contains all the phosphorus of the original lecithin, and unites with glycerin to form glycero-phosphoric acid. The fourth decomposition product—choline—is an ammonium-like base, and contains all the nitrogen of the lecithin. I dealt with these points more fully in my Croonian lectures, but it may be necessary to remind my hearers of these main facts in order to pave the way to what we are coming. I would further remind you that Mott and I showed that in degenerative diseases of the nervous system, as well as in the degeneration artificially produced in animals by the cutting of nerves, the products of degeneration pass into the circulating fluids, and can be detected there. We further showed that in a certain stage of the degenerative process in a nerve all traces of phosphorised fat disappear and the fat or fatty acid which is absorbed more slowly remains in the nerve sheath for a considerable time, and while it is present it continues to give the Marchi reaction.

### THE DETECTION OF CHOLINE.

In our work we laid special stress on the importance of the discovery of choline in the blood and cerebro-spinal fluid. If this is found, there is available a definite proof of the breakdown of nervous tissues. We further indicated that the detection of choline in such situations might be of practical service in diagnosing organic nervous diseases, for functional disturbances are often difficult to distinguish from these by the observance of mere symptoms. This discovery has been confirmed by numerous subsequent observers and the expectation that the test would be diagnostically useful has also been fulfilled. On the other hand, our methods for the detection of choline have been subjected to criticism, and it has been this criticism which has stimulated us to further work on the subject and has led us to modify the tests we previously published, and also to rectify some of our conclusions. As the invention of the choline test has been hitherto the main practical outcome of our work from the clinical point of view, I take this opportunity, when I am addressing physicians, of amplifying this part of my subject by mentioning the main objections that have been raised to our work, the further examination to which we have in consequence subjected our methods, and the present conclusions at which we have arrived. I think you will find that we have succeeded in confirming all our main previous statements, and what is more important, rendering the means of detecting choline absolutely trustworthy.

The tests for choline which Mott and I chiefly dealt with were two in number. The cerebro-spinal fluid or the blood was first extracted with absolute alcohol; the alcoholic extract was evaporated to dryness and the residue again taken up with alcohol, and this operation was repeated several times in order to avoid any contamination with potassium salts. We imagined at the time that potassium salts were quite insoluble in absolute alcohol. The final residue was dissolved in alcohol again and an alcoholic solution of platinum chloride added; the yellow precipitate so produced was washed with alcohol by decantation and finally dissolved in 15 per cent. alcohol; on evaporation of this at a fairly low temperature yellow crystals (prisms and octahedra) separated out, and these consist of the double chloride of choline and platinum. The same test with slight modifications was also adopted by Donath in Germany, who was one of numerous others to confirm our results.[1]

The second test was a physiological one. It consisted in taking the final residue after alcoholic extraction and dissolving it in salt solution. When this solution is injected into the blood stream of anæsthetised animals it produces a temporary fall of arterial blood pressure; if, however, the animal has been previously poisoned with atropine the fall is either absent or replaced by a rise. This action is characteristic of choline and is quite different from the effect produced by the substances most likely to be confused with choline, which are the chlorides of ammonium and of potassium. It is, however, a test which is not available for ordinary clinical use and so special interest attaches to the chemical test which can be obtained with smaller quantities either of the cerebro spinal fluid or of the blood.

It is the chemical test which has been mainly the cause of the criticisms to which I have alluded. Some of our critics seem to have thought that we had been content to diagnose the crystals of the choline platinum compound by mere inspection, which is usually a fallacious method of identifying any crystalline substance. If our original papers are consulted it will be seen that this is not the case; in some cases where we were successful in obtaining a large supply of material we examined other properties of these crystals (their solubilities, the amount of platinum in them, &c.) and, moreover, found that on heating they gave out the odour of trimethylamine, and we further supported our statement that choline was present by performing other tests in addition. Some critics—for instance, Vincent and Cramer—regarded our contentions as "*a priori* improbable" and "scarcely conceivable," but they did not examine either pathological blood or cerebro-spinal fluid in order to determine whether the facts as we had stated them were correct or not.

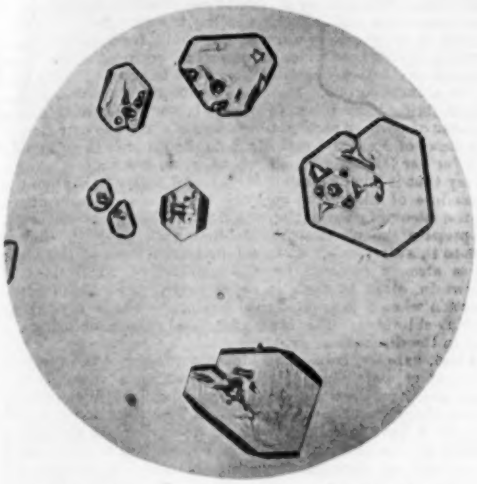
The first serious piece of criticism came from Guy's Hospital. Allen and French pointed out that the treatment with absolute alcohol did not get rid of potassium salts entirely; and as the platino-chloride of potassium is exactly similar in form to that of choline platino-chloride inspection of crystals obtained by our method was insufficient to distinguish them. Inspection of crystals is usually the only test which a clinical observer has time for; and if the amount of material is small it is probably the only available test. On account of this uncertainty Allen and French abandoned the platinum test entirely and adopted instead a modification of the iodine test for choline in which there is no risk of such confusion. By the help of this reaction Allen subsequently confirmed our statements concerning the presence of choline in the blood of patients suffering from acute degeneration of nervous structures.

The accompanying drawing from a photograph (Fig. 1) will illustrate the impossibility of identifying the two platino-chlorides in question by their crystalline form. At

[1] Donath's statement that choline is similarly also found in the fluids of epileptics requires confirmation. If the diagnosis of epilepsy in these cases was correct, and the existence of choline is confirmed, it appears necessary to remove epilepsy from the list of functional diseases.

this lapse of time I cannot remember which of the crystals are those composed of the choline and which of the potassium compound. They are quite indistinguishable by mere inspection; but they can be distinguished, as I shall presently show, and were actually distinguished in the specimen from which the photograph was made. Shortly after Allen and French published their observations a paper

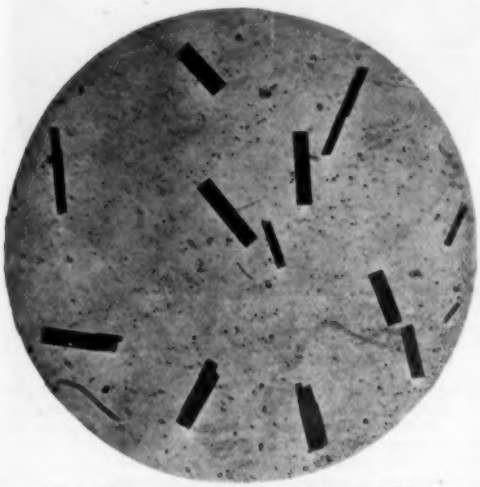
FIG. 1.



Crystals of platino-chloride of choline and platino-chloride of potassium on the same slide. (From a photograph by Otto Rosenheim.)

by Mansfeld appeared in one of the German journals criticising Donath's results on much the same lines. I thought, therefore, it was high time for us to take up the matter once more, and I therefore placed it in the hands of Dr. Otto Rosenheim, whose knowledge of chemistry and chemical technique is much superior to my own, and he

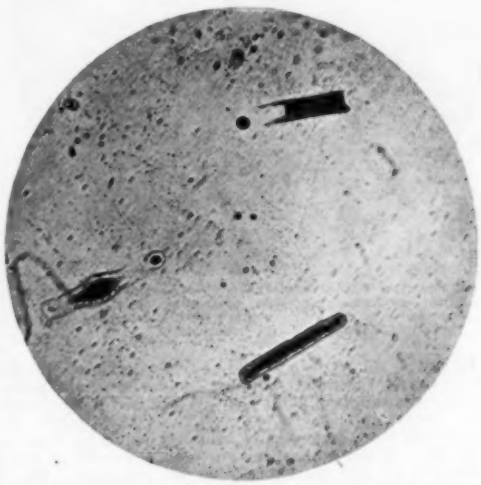
FIG. 2.



Photomicrograph of the crystals of choline periodide. (O. Rosenheim.)

carried out the research in my laboratory. In the course of his work he came to the conclusion that the solubilities of potassium and ammonium salts in absolute alcohol and of their platino-chlorides in 15 per cent. alcohol, though small, were nevertheless such as to make a contamination of the final choline platino-chloride, with platino-chlorides of potassium or ammonium, a possible source of error. It was therefore necessary to search for other tests for choline which are not given by these inorganic salts. As an outcome of his work he discovered three such tests, but I shall be content here with describing one only, since it is simple and easily applied, and, moreover, is absolutely decisive. Like Allen's, it is a modification of the iodine test and it is performed in the following way. A strong solution of iodine in potassium iodide is added to a preparation of the choline platino-chloride crystals; these then alter in a characteristic way, and the change may be watched with the microscope. In the course of a minute or so the yellow crystals as shown in Fig. 1 disappear and their place is taken by dark-brown plates and prisms in large quantities. They show marked dichroism, they are doubly refracting, and have a superficial resemblance to the well-known hæmin crystals. Their appearance is depicted in Fig. 2. They are composed of a periodide of choline ($C_5H_{14}NOI.I_8$), but are extremely unstable, and if the slide is allowed to stand so that the liquid gradually evaporates the crystals begin to disappear, and their place is taken by brown oily droplets, or sometimes clear spaces showing the skeletons of the crystals are seen. This indicates the formation of a lower iodide and the appearance is depicted in the next figure (Fig. 3).

FIG. 3.



This shows the disintegration and the formation of oily droplets which occurs when the choline periodide is exposed to the air. (From a photograph by O. Rosenheim.)

If, now, a fresh drop of the iodine solution is added the crystals gradually form once more and their formation and disappearance can be watched repeatedly. If platino-chlorides of potassium or ammonium are present on the same slide they remain unchanged under the action of the iodine solution. It was possible by this simple test to detect choline in 20 cubic centimetres of blood when choline had been added in the proportion of 1 to 20,000. When five cubic centimetres of blood containing choline in the proportion of 1 to 2000 were used the whole field was covered with crystals which could be seen with the naked eye.

In the same number of the *Journal of Physiology* in which Rosenheim published these interesting and striking results Donath answered his critics by publishing another distinctive character of the crystals of the platino-chloride of choline. They are doubly refracting and so appear bright in the dark field of the polarising microscope and show changes in illumination when they are rotated in the field. In this way every microscopic fragment of the choline platino-chloride is rendered visible which by ordinary microscopic methods might escape detection owing to their transparency. The platino-chlorides of potassium and ammonium do not exhibit this phenomenon. Donath puts his case very well when he says:—

The occurrence of inorganic chlorides which have hitherto interfered with the testing for choline by the platinum reaction on account of their slight solubility in absolute alcohol is a circumstance which

has lost its terrors, so much so that an actual addition of potassium-chloride has become part of my method, and causes no difficulty when the polarisation test is applied.

He then proceeds to give a list of cases where he has examined the cerebro-spinal fluid removed by lumbar puncture from patients suffering from various nervous diseases, and illustrates his results by a series of photo-micrographs showing the crystals under various positions in the field of the polarising microscope. Dr. Rosenheim has confirmed these statements and the next figure (Fig. 4) illustrates the appearances observed.

FIG. 4.

Preparation of crystals of the platino-chlorides of choline (needles) and of potassium (octahedra) obtained from a specimen of cerebro-spinal fluid from a case of general paralysis of the insane. (O. Rosenheim.)

In Fig. 4 the crystals of the platino-chloride of choline are seen as separated from an actual case of pathological cerebro-spinal fluid. In this case they were crystallised from an aqueous solution and have taken the needle-like form they usually exhibit when crystallised in this way. Mixed with them are seen a number of small octahedra of the platino-chloride of potassium. Fig. 5 shows the same preparation under polarised light; the crystals of the choline salt show up as bright needles, but the crystals of the potassium salt have disappeared from view. The crystals of the choline salt in this case further gave Rosenheim's new iodine reaction. In some cases Rosenheim made out another fact which is not devoid of significance. If he obtains from cerebro-spinal fluid which contains choline a slide of the crystals of the mixed platino-chlorides and places it under the field of the polarising microscope, the inorganic platino-chlorides exhibit no double refraction but a large proportion of the crystals present show the phenomenon. If he then subjects the same slide to his iodine test many of the doubly refracting crystals are transformed into the brown crystals of the periodide of choline, but some remain unaltered and others yield crystals of different form from the choline periodide. In other words, some of the doubly refracting crystals are not choline compounds but probably crystals of other organic platino-chlorides. This is only what one would expect. Mott and I were always from the first careful to point out that choline is not the only product of nervous breakdown; the complex chemical structure of nervous material to which I have alluded in some of the earlier passages of this lecture would lead one to suppose that the cleavage products which are liberated during the degenerative process would be exceedingly numerous. We called attention, among other points, to the great increase of the nucleo-protein which passes into the cerebro-spinal fluid in such circumstances. The importance of the detection of choline arises because it is at present the only one of these numerous substances which has been identified with certainty and which can be detected with comparative ease. Its presence indicates the breakdown of one of the best known of the constituents of nervous matter (lecithin), but suggests that it must be accompanied by the presence of numerous other similar and even dissimilar compounds.

During the last year Dr. Mott has sent from Claybury Asylum a great number of specimens of cerebro-spinal fluid to Dr. Rosenheim, and the latter has subjected them to his new tests. The number of specimens of blood similarly sent has been small, and hitherto choline has only been detected in one of these; they were in the main from cases where choline would hardly be expected to occur, for, as Mott pointed out, active degeneration must be recent for the test to be a decisive one. But the examinations of the cerebro-spinal fluids have been fully satisfactory and a sufficient number of positive results have been obtained to corroborate the views of Mott and myself. I do not propose to anticipate any further Dr. Rosenheim's full paper on the subject except to say that it has ultimately been found better to shorten the procedure of testing by applying the iodine reaction direct to the alcoholic extract of the fluid. There is no necessity to prepare the platino-chloride first and apply the iodine test to those crystals. It was found that some of the other bases already referred to, the identity of which is still uncertain, often by their presence interfere with the iodine reaction when it is applied to the mixtures of the crystalline platino-chlorides. This is an additional reason for using the test in the direct manner.

I had, happily, kept a considerable number of the preparations of crystals which Mott and I had made years ago and from which we drew our previous conclusions. On examining these afresh by the new means of identification we now possess I have found that without doubt they do not consist wholly of the choline compound but contain a considerable admixture of inorganic platino-chlorides, especially the

FIG. 5.

The same preparation in the dark field of the polarising microscope; the crystals of the choline salt are bright, but the crystals of the potassium salt have become invisible. (O. Rosenheim.)

platino-chloride of potassium. We, however, still hold that the obtaining of a large crop of crystals, whether they be those of the choline salt or a mixture of the potassium and choline salts, is diagnostic of extensive breakdown in nervous tissues. The contrast between such cases and the insignificant yield from normal blood is most striking. This is quite intelligible when we take into account the very high percentage of potassium that nervous tissues contain. This has been amply demonstrated by the microchemical work of Macallum and of Macdonald. The rôle which Macdonald assigns to the potassium salts in nervous phenomena it is unnecessary to discuss here, interesting and important as his views are. This has suggested to us a new piece of work which has only just been started—namely, the actual estimation of the potassium in the cerebro-spinal fluid and blood in cases of acute degenerative diseases of the nervous

system in comparison with the normal. I am sorry I cannot at present give any final figures but, so far as the preliminary work goes, it indicates a considerable increase of the potassium in those cases where disintegration has occurred and where choline is also discoverable.

### THE PHYSIOLOGICAL TEST FOR CHOLINE.

I have devoted so much time to the chemical test for choline because that is the one so obviously suitable for clinical work. The physiological effect on the blood pressure that choline exercises is, however, not devoid of interest, and a brief mention of some recent work in this direction will conclude what I have to say. Swale Vincent, in his earlier work on the physiological action of extracts of nervous tissues, found that the intravascular injection of such extracts caused in anæsthetised animals a considerable fall of blood pressure. I had simultaneously published similar results and attributed the fall to the presence of choline. Vincent, however, denied that choline was present. He subsequently, with Cramer, amended this statement, but was of opinion that the choline present was in the form of dicholine anhydride. The existence of this compound is very problematical and the analytical evidence presented is not very convincing; still the suggestion that compounds or modifications of choline may exist is not devoid of interest. Vincent and Cramer also found what I had missed—namely, that there are other substances present in such extracts which are readily soluble in ether and which produce a much more powerful depressor effect on the blood pressure than choline, and that in the case of such substances the depressor effect is not abolished by atropinisation. The identification of these other materials was not attempted. It is quite possible that these substances are absolutely distinct from choline; and, on the other hand, the view is permissible that they are choline derivatives. This second view gains point from a study of some experiments which Reid Hunt and Taveau brought forward at the meeting of the British Medical Association in Toronto last year.

Dr. Hunt is one of numerous American pathologists who have repeated and confirmed the original statements of Mott and myself and has thrown himself into the choline controversy with characteristic transatlantic enthusiasm. He has prepared and studied the physiological action of as many as 19 compounds of choline and suggests the possibility that some of these may be formed in the body. Some of them are more and others less active than choline itself; the most powerful is acetylcholine; this is one hundred times more active in producing a fall of blood pressure than adrenalin is in producing rise; the injection of a few cubic centimetres of a solution containing it, diluted with one hundred million times its volume of water, produces a distinct effect in a rabbit. The action of acetyl choline is not annulled by atropine, and it is capable of overcoming the effect of adrenalin. On the other hand, some of the choline derivatives examined were less powerful than choline itself; the introduction of a phenyl group, for instance, diminishes its depressor effect. As an outcome of his work Dr. Reid Hunt recommends two new tests for choline; one is the formation of the acetyl compound to render the physiological test more sensitive, the other is the formation of the benzoyl compound; this gives a distinctive crystalline platinum salt which cannot be confused with the platino-chlorides of ammonium or potassium. I have not actually tested these methods myself but I think I have said sufficient to show that in the future those engaged in research will have no lack of methods to render the testing for choline a matter of no difficulty.

*The bibliography of* this subject up to 1905 will be found very completely given in my article on Die Biochemie der Nerven in the *Ergebnisse der Physiologie*, vol. iv., p. 23, 1905. The principal papers which have appeared since are the following:—J. Donath: *Journal of Physiology*, vol. xxxiii., p. 21[1]; Rosenheim: Ibid., p. 220; Reid Hunt and Taveau: *Brit. Med. Jour.*, 1906, vol. ii. p. 1783. Several observers have surmised that the breakdown of lecithin is due to the activity of a ferment; the ferment has, however, not been isolated. Marinesco (*La Presse Médicale*, Feb. 16th, 1907) suggests that the ferment is formed by the neurilemmal cells, which actively multiply during Wallerian degeneration.

HOSPITAL SUNDAY IN CARDIFF.—April 28th was observed in Cardiff as "Infirmary Sunday." As the result of last year's collection £777 were raised for the funds of the Cardiff Infirmary.

# A Lecture
ON
# CEREBRO-SPINAL FEVER.

*Delivered at the London Hospital on March 21st, 1907,*

BY CECIL WALL, M.A., M.D. OXON., M.R.C.P. LOND.,

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GENTLEMEN,—The study of cerebro-spinal fever is always interesting; at the present time it has become exceptionally important owing to the increase in the number and severity of the cases occurring in various parts of the country. I propose, therefore, to discuss with you certain points which are of value in the clinical diagnosis and will preface my remarks with a few words on the morbid anatomy and the nomenclature of the disease.

Cerebro-spinal fever is the result of an acute meningo-encephalitis; in the very early stage at the post-mortem examination little abnormal may be seen save an intense, perhaps hæmorrhagic, inflammation of the pia mater and arachnoid covering the brain and spinal cord with evidence of inflammation of the cortical grey matter of the brain. At a later stage a more characteristic condition may be found, the inflammation of the pia mater and arachnoid being associated with a purulent exudate between them; this exudate is most marked where the subarachnoid space is widest, so that purulent collections are formed on the sulci of the cortex, in the lymph cisterns at the base of the brain, and in the spinal cord. If death occurred at a late stage of the disease an extensive serous exudate might be found distending the basal cisterns, the subarachnoid space surrounding the spinal cord and the lateral ventricles of the brain (with which the subarachnoid space communicates through the foramen of Majendie), the fourth ventricle, the iter, and the third ventricle. The distension of the ventricles leads to flattening of the cortical convolutions and obliteration of the subarachnoid space. The purulent exudate is thus driven from the surface of the brain to the base and is found in large quantities only there and in the spinal canal.

It is thus possible to distinguish three stages in the disease. In the first stage, when the patient has died in less than 48 hours from the onset, there is an acute, possibly hæmorrhagic, meningo-encephalitis, without exudation. In the second stage the meningo-encephalitis is associated with a purulent exudate into the subarachnoid space. This condition is usually found if the patient has died within about 14 days from the onset. In the third stage there may be an extensive serous effusion distending the subarachnoid space and the cerebral ventricles. The purulent exudate may be collected in the wider arachnoid spaces or may have disappeared more or less completely. This condition may be found as early as 18 days from the onset and may persist for weeks or months and sometimes is the cause of the condition known as chronic hydrocephalus. Other morbid conditions may be present but need not be detailed here.

Acute general meningo-encephalitis is, without doubt, always the result of infection by some micro-organism; the meningococcus, the pneumococcus, and streptococci are those most usually present. In the disease known as epidemic or sporadic cerebro-spinal fever the meningococcus is said to be the causal agent, though the proof is not yet quite complete. Cerebro-spinal meningitis due to the meningococcus is an endemic disease of which we are seldom without some examples in this hospital; under the name of posterior basic meningitis or cervical opisthotonos of infants it is by no means rare. Posterior basic meningitis is the term applied to a comparatively mild form of the disease occurring in children in which a fatal result tends to occur in the third stage. It is, perhaps, unfortunate that the name still persists, seeing that it suggests but one of the accidental characters of a general acute meningitis. At times, especially in the spring, the cases occur much more frequently and occasionally the increase in number and severity of the symptoms seems to justify the term epidemic.

The word epidemic suggests in the minds of most that the infection may be transmitted from person to person by contact or by fomites. We read of past epidemics of a disease

presenting symptoms similar to those produced by infection with the meningococcus, in which evidence of transmissibility by contagion was strong, but since the introduction of the bacteriological methods of diagnosis no epidemic has occurred where such evidence has been forthcoming. In 1905 there was an outbreak of cerebro-spinal meningitis at Irthlingborough, in which spread by contagion was probable. This was investigated by the Local Government Board, but unfortunately the bacteriological evidence that the meningococcus was responsible was based on the examination of the nasal secretion of two cases only and can scarcely be deemed conclusive. In the sporadic cases with which we are familiar instances of infection by contact are practically unknown; there seems to be no clue to the mode of infection, though the nasal mucosa is commonly suspected. Hence we are driven to the conclusion that either the meningococcus may at times, owing to unknown circumstances, become more virulent, or some other organism may be responsible for those epidemics where transmissibility by contagion is a marked feature of the disease. Further information upon this point is urgently required; it is to be hoped that the action of the London County Council in requiring notification of the disease may determine the question.

The recognition of the disease at the bedside is the point to which I wish particularly to draw your attention. It is convenient to group the symptoms and signs according to the underlying pathological state. In the first place, cerebro-spinal fever is a general disease with definite local manifestations. Of the incubation period we know nothing; the invasion is usually sudden, with fever, vomiting, rapid wasting, and general febrile symptoms; in the malignant type, as with other specific fevers, a purpuric rash may develop which has led to the name "spotted fever" and in the past has frequently led to confusion of the disease with typhus fever. Other symptoms and signs are referable to the local disease: acute encephalitis occurring after development of the cortex cerebri leads to headache and profound alterations of consciousness, such as delirium or coma, and to spontaneous movements of the limbs, convulsions, and paralysis. Dissociation of movements of the eyeballs is common in the young and can be explained as reversion to a previous stage of development consequent upon the removal of the recently acquired cortical control. Blindness without alteration of the pupillary light reflex and deafness may develop and persist for a long time; the usual cause seems to be the encephalitis. In the young child up to the end of the first year of life the functions of the cortex are so little developed that their abolition or impairment by encephalitis may escape notice; many cases of the so-called posterior basic meningitis of infants afford examples in proof of this statement.

Inflammation of the meninges can only be recognised by the reflex muscular contraction which tends to prevent any mechanical disturbance and by the implication of sensory nerves with consequent referred pain. There are two situations where movements of the body lead to movements of the meninges; in flexion and extension of the head the cerebellum slides up and down the posterior surface of the medulla and unfolds or folds the arachnoid which forms the bridge between them. If the arachnoid be inflamed the muscles at the back of the neck contract to prevent such movement; resistance against antero-posterior movement of the head without resistance to movements of rotation about a vertical axis is a sign very commonly present when there is inflammation of the meninges at the base of the brain. Sometimes the contraction is so extreme that the occiput actually touches the skin between the scapulæ and there is a general spinal opisthotonos with great rigidity. The other situation in which mechanical disturbance of the meninges results from movements of the body is in the lumbar and sacral regions; if the sciatic nerve be stretched the traction is transmitted to the spinal meninges. This is the explanation of the sign of spinal meningitis described by Kernig; if one hip joint be flexed to a right angle, the other being kept extended to prevent a fallacy from tilting of the pelvis, and the knee-joint be then passively extended, the hamstrings will reflexly contract and prevent extension of the knee-joint beyond a right angle and a half (135°) when there is acute inflammation of the spinal meninges. These two signs are very frequently present in cases of acute cerebro-spinal meningitis. Referred pain due to implication of the nerve roots in the inflammatory process explains the remarkable cutaneous tenderness which may be present in those patients sufficiently conscious to appreciate it.

We can now pass on to the consideration of the signs by which we can recognise a marked increase in the cerebro-spinal fluid which may occur in the third stage of the disease. Increased intracranial pressure leads to vomiting, spasmodic retraction of the upper eyelids, impairment of the cerebral functions, and not infrequently to swelling of the optic discs; if the fontanelle be still patent its tenseness may give direct evidence of the rise of pressure; in very young infants before the sutures between the skull bones have united there may be separation of the bones.

We have now discussed in general the symptoms and signs likely to be present in a case of acute cerebro-spinal meningitis: the etiological diagnosis remains to be considered. This can only be established absolutely by the identification of the infecting organism. The method employed to obtain material for examination is to perform lumbar puncture in the early stages; the fluid thus obtained will probably be scanty, moderately albuminous, and containing many polymorphonuclear leucocytes. The meningococcus, if present, may be identified by cultivation and may be seen within the cells in smear preparations. In the later stages the fluid may be under considerable pressure and a large quantity may be obtained; the albumin will be less in amount and the cellular elements more scanty and the meningococci more difficult of identification and cultivation. In this stage symptoms due to increased intracranial pressure may be remarkably alleviated by lumbar puncture.

I will now recapitulate the chief clinical characters of the disease. Patients of any age may be attacked but it is much more common in children. In sporadic cases there is no evidence of spread by contagion, and the proof of such spread in epidemics proved to be due to the meningococcus is inconclusive. The onset is usually sudden, but in young children the presence of symptoms due to the encephalitis may be difficult to recognise. The common mode of invasion is by headache, vomiting, cutaneous and muscular tenderness, convulsions with delirium, or other profound mental disturbance; there is usually some fever, the temperature being from 102° to 105° F. Rigidity of the neck, retraction of the head, and Kernig's sign are frequently present; dissociated movements of the eyeballs may occur; optic neuritis is uncommon. Wasting is rapid, and petechial or herpetic eruptions may develop. Lumbar puncture performed at this stage may be unsuccessful or a small quantity of turbid fluid may be withdrawn. This first period of the disease corresponds with the first and second stages of the pathological development; it lasts from two to ten days and the pyrexia often terminates by crisis, and a convalescence, generally tedious, may be established. Frequently the first stage merges, with or without a brief period of apparent improvement, into the stage of internal hydrocephalus. If this occurs on about the eighteenth day from the onset of the disease vomiting, spasmodic retraction of the upper lids, and a recrudescence of the mental disturbance, perhaps with convulsions, will develop and the temperature will become irregular. In young babies these symptoms may be absent and the increase in cerebro-spinal fluid may be recognised only by the rapid enlargement of the skull with bulging of the fontanelle and starting of the sutures. Death may occur during this stage of internal hydrocephalus or the condition may become chronic, or recovery, partial or complete, may be the result. With partial recovery the possible after-effects are numerous: persistent blindness or deafness with consequent mutism, a dementia akin to that of general paralysis, imbecility, epileptiform convulsions, spastic paraplegia, or diplegia may be the legacy of the disease.

In the early stage the diagnosis has to be made most usually from influenza, typhus, and typhoid fever. Influenza may closely simulate meningitis in the suddenness of onset, in the headache, and in the pyrexia; the absence of evidence of abolition of the cerebral function and of the signs of basal and spinal meningitis are points upon which stress should be laid. Lumbar puncture may be necessary to settle the diagnosis. In former days typhus fever and meningitis were frequently confused; in modern times typhus fever is so rare that the difficulty in diagnosis does not often arise. The gradual onset of typhoid fever, the apathetic state, and the development of the typical signs and symptoms with the agglutination reaction usually serve to distinguish the condition. I have known meningitis incorrectly suspected when the neck has become rigid owing to inflamed cervical

glands, to cervical caries, or to retropharyngeal abscess. Careful examination usually serves to eliminate these difficulties.

Finally, I would point out to you some of the difficulties that may arise in distinguishing acute meningitis from tuberculous meningitis. Tuberculous meningitis generally develops insidiously, though sometimes there may be convulsions at the onset; consciousness may be impaired but not so much as to prevent irritable resentment against disturbance (Stocker's sign), except towards the end, when with the increased intracranial pressure the patient may sink into coma. Pyrexia is generally moderate, from 99° to 101° F., though at the end there may be hyperpyrexia; constipation is usually obstinate, vomiting common. In tuberculous meningitis head retraction and Kernig's sign are only occasionally present; paralytic squint, hippus, optic neuritis, and tubercles on the choroid are sometimes found. Acute general tuberculosis is generally present and leads to a peculiar lividity which often serves to help the diagnosis in doubtful cases. A fatal termination almost always results within 23 days from the onset, generally on the twenty-first, so that if the disease has exceeded this duration tuberculosis as the cause of the condition becomes improbable. Lumbar puncture in tuberculous meningitis is generally followed by a free flow of clear fluid under pressure. This fluid is slightly albuminous, reduces Fehling's solution, and contains a few mononuclear leucocytes. On precipitating the albumin by adding an equal volume of 5 per cent. phenol and staining the deposit with carbol-fuchsin tubercle bacilli may be demonstrated occasionally. Cultures generally remain sterile.

The treatment of cerebro-spinal fever is difficult. Recently an anti-meningococcic serum has been introduced by Kolle and Wassermann and is worthy of trial in the early stages of the disease. In estimating its value it must be remembered that without it about 40 per cent. of the patients attacked recover. In the later stages relief of intracranial tension by lumbar puncture is of undoubted therapeutic value. Otherwise the treatment is purely symptomatic, great attention being paid to the feeding, which if necessary should be effected by the nasal tube.

## A NOTE ON THE OPSONIC POWER OF THE SERUM WITH REFERENCE TO THE MENINGOCOCCUS OF CEREBRO-SPINAL FEVER OCCURRING IN THE BELFAST EPIDEMIC.

BY THOMAS HOUSTON, M.D. R.U.I.,

AND

J. C. RANKIN, M.D. R.U.I.

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ALTHOUGH many contributions have been published within recent years confirming the work of Sir A. E. Wright in reference to the tuberculous and staphylococcic lesions, the general application of the opsonic method to the diagnosis and study of other infections has not met with the attention it deserves. In the case of micro organisms susceptible to the opsonic action of the serum this method provides us with a means of definitely deciding whether a given micro-organism is or is not actively engaged in an infection.

In working with certain micro-organisms difficulties of technique present themselves which must be overcome before satisfactory determinations can be obtained. Some of these difficulties are well exemplified in the case of the meningococcus. Thus it was found that the earlier subcultures of a freshly isolated meningococcus contained a large number of degeneration forms which stained indistinctly. For this reason an accurate opsonic determination could not be done with these subcultures. Professor W. St. C. Symmers had, however, kept several strains of the meningococcus alive by daily subcultures on chapasgar[1] and he provided us with a growth in the thirty-fifth generation which would grow actively when transplanted on ordinary agar slopes. This growth was kept alive by daily subculture on chapasgar and a six hours' growth on agar of the last subculture of this strain was used to make the test emulsion. The emulsion, which was made in the usual way with 1·5 per cent. sodium chloride solution, was found to contain very few degeneration forms and was quite uniform, the cocci rarely occurring in aggregations of more than two or three; nothing resembling a clump was ever observed; normal serum when mixed with this emulsion had no tendency to produce any agglutination.

The opsonic power of normal serum with reference to the meningococcus was found to be extremely low when contrasted with that of normal serum for such micro-organisms as the tubercle bacillus or the staphylococcus. It was therefore necessary to use a thick emulsion in order that the control preparations might show a distinct phagocytosis. On the other hand, the serum of many of the cerebro-spinal cases had an exceedingly high opsonic power, so that in many of the preparations containing the patients' sera the leucocytes were packed so full of cocci that accurate counts became impossible. In order to obtain an approximate count in such cases the following rule was adopted: The preparations in almost every instance were counted by two observers and the number of cocci in 50 leucocytes was determined—leucocytes packed with cocci were given credit for 50 cocci, although in several instances the number of cocci ingested might considerably exceed this number. This convention makes the determined opsonic index in some of the cases with very high opsonic sera below rather than above the true figure. The determinations, however, made by different observers usually showed only slight variations, and the results may therefore be considered as approximately accurate.

The following is a list of 63 determinations of the opsonic power of the serum in cases of cerebro-spinal fever occurring in the Belfast epidemic. A few clinical details are given for purposes of references; these were kindly supplied to us by Dr. W. Patton, Dr. W. J. Leighton, and Dr. E. H. M. Milligen, the house physicians at the fever hospitals. It will be noted in the table that in some of the cases repeated examinations were made at different periods—(1), (2), (3) after the cases refer to these examinations.

In this table the column headed "agglutination" requires some explanation. In making the opsonic determinations in the usual way and incubating the mixture of washed corpuscles, emulsion of meningococci and serum for 15 minutes it was at once observed that many of the preparations containing the patient's serum showed marked agglutination of the meningococci, while the controls throughout the whole series never showed any (the determinations were always made with two separate controls). In order further to test this absence of agglutination with non-infected serum a number of different normals (seven in all) were at different times used as controls, also sera from cases infected with tubercle, typhoid fever, staphylococcus and micrococcus melitensis, as well as rabbit and guinea-pigs' sera. In no case was there any agglutination observed with such sera. In other words, the opsonic method in the case of meningococcus provides us with two distinct indications to determine the presence or absence of infection: first, the opsonic index; and second, the presence or absence of agglutination in the preparations. In this column + stands for an unmistakeable reaction, ++ indicates dense clumps, and +++ an exceedingly well-marked reaction.

A number of deductions seemed justified by this table of results:—

1. From the sixth day onwards all the cases examined (with one exception on the seventh day) showed an opsonic index of over 4; several of the cases from the second day onwards also gave an opsonic index of much above 4.

2. The opsonic index seems to be a more delicate test of infection than an agglutinative experiment (dilution 1 in 3, incubator temperature, limit 15 minutes); the agglutinative effect was never noticed until the index reached five times the normal, while after that (with one exception, L——n, on the fourth day, index 6·8) it was always well marked.

3. The combination of this agglutinative effect and the opsonic determination will furnish in this disease a specific test of great value in diagnosis. The low opsonic power always found in normal or non-infected sera, so that even when moderately thick emulsions are used two or three cocci were the maximum found in any leucocyte, and the uniform absence of all agglutinative effect in all preparations containing normal serum forms a striking contrast with

[1] This medium (chapasgar consists of one part of raw ascitic fluid and two parts of 3 per cent. agar made with Chapoteau's peptone. Professor Symmers has found that this combination is a very suitable medium for isolating and growing the meningococcus.

TABLE OF 63 DETERMINATIONS OF THE OPSONIC POWER OF THE SERUM IN CEREBRO SPINAL FEVER.

| Name of patient. | Age. years. | Day of disease. | Temperature (F.) morning and evening. | Opsonic index. | Date. | Agglutination. | Remarks. |
|---|---|---|---|---|---|---|---|
| A——n. | 13 | 1st. | 97°-101° | 0·58 | March 23rd. | – | Died 36 hours after onset. |
| G——e. | 21 | 2nd. | 99·4°-103·8° | 1·5 | April 10th. | – | — |
| M'A——s. | 9 | ,, | 99·2°-99·6° | 1·6 | March 5th. | – | Died on eighteenth day of disease. |
| D——y. | 5 | ,, | Subnormal. | 16·55 | April 10th. | + | Died on third day. |
| N——e. | 16 | ,, | 97·6°-100° | 1·2 | March 25rd. | – | Died on third day of disease, meningococcus isolated from the blood by Dr. W. J. Wilson. |
| M——e (1). | 7 | ,, | 101°-102·4° | 2·6 | March 23rd. | – | — |
| M——ne (1). | 7 | 3rd. | 99°-98° | 1·7 | ,, 26th. | – | — |
| A——n. | 4½ | ,, | 99·4°-104° | 1·4 | ,, 26th. | – | Died on third day of disease. |
| R——n. | 7 | ,, | 96·6°-101° | 16·7 | April 4th. | + | Died on seventh day of disease, meningococcus isolated by lumbar puncture by Professor Symmers. |
| M——ne (2). | 7 | 4th. | 100°-98° | 1·6 | March 27th. | – | — |
| M'A——s. | 14 | ,, | 101·6°-100·6° | 1·6 | ,, 11th. | – | Died on sixth day of disease. |
| F——e. | 10 | ,, | 102·4°-100·4° | 1·2 | ,, 26th. | – | Died on fourth day. |
| R——y (1). | 14 | ,, | 99·4°-100° | 1·2 | April 4th. | – | — |
| L——n. | 25 | ,, | 100°-101° | 6·8 | March 22nd. | – | Meningococcus isolated by lumbar puncture by Professor Symmers. |
| H——n. | 15 | 5th. | 98°-102° | 6·09 | ,, 27th. | + | — |
| K——y. | 4 | ,, | 96°-98·8° | 0·4 | ,, 23rd. | – | Died on sixth day of disease. |
| F——l. | 15 | ,, | 10.°-102·4° | 1·5 | ,, 26th. | – | Died on thirteenth day of disease. |
| F——e (1). | 10½ | ,, | 99°-98·4° | 14·04 | April 5th. | – | (See below.) |
| B——er. | 3½ | 6th. | 99°-98·4° | 30·0 | March 18th. | ++ | Died on twenty-second day of disease. |
| C——r. | 22 | ,, | 99·6°-99·6° | 7·3 | ,, 26th. | + | Convalescent on April 1st. |
| H——s. | 12 | ,, | 101°-102° | 26·4 | April 4th. | ++ | Died on tenth day. |
| C——n. | 3½ | 7th. | 100·2°-99·6° | 1·8 | ,, 12th. | – | — |
| M'G——y. | 14 | ,, | 99°-101·6° | 18·7 | ,, 5th. | ++ | Died on eighth day. |
| S——h. | 8 | 8th. | 99·8°-101·8° | 10·4 | March 19th. | + | — |
| Ha——n. | 9 | ,, | 100°-102·8° | 12·7 | ,, 19th. | + | Convalescent on March 23th. |
| M'I——y. | 8 | ,, | 98·4°-99·6° | 17·0 | ,, 21st. | ++ | — |
| T——l. | 16½ | ,, | 100·2°-102° | 11·4 | April 4th. | + | Died on eighth day. |
| M——s (1). | 12 | ,, | 101·4°-102° | 11·5 | ,, 5th. | + | — |
| R——y (2). | 14 | ,, | 99·4°-99° | 66·0 | ,, 6th. | ++ | — |
| M——y. | — | 9th. | — | 5·8 | March 9th. | + | Died on eleventh day. |
| M'A——r (1). | 5 | ,, | 98·2°-100° | 30·5 | ,, 20th. | ++ | — |
| F——e (2). | 11 | 10th. | 102·6°-102·8° | 25·25 | April 10th. | ++ | Died on tenth day. |
| R——y (3). | 14 | ,, | 99·8°-100·8° | 23·4 | ,, 10th. | ++ | — |
| B——n. | 43 | ,, | 100·2°-97° | 42·2 | ,, 5th. | +++ | Meningococcus isolated by lumbar puncture. |
| C——n. | 25 | 11th. | 97·4°-99° | 6·9 | March 27th. | + | — |
| R——d. | 28 | ,, | 100°-102·4° | 22·0 | ,, 21st. | ++ | Meningococcus isolated by lumbar puncture. Died on twelfth day. |
| M——re. | 3 | ,, | 99°-101° | 15·0 | ,, 21st. | ++ | Convalescent on April 9th. |
| W——er. | 23 | ,, | 98·2°-100·2° | 7·9 | April 12th. | + | — |
| R——y (4). | 14 | 12th. | 99·8°-101·4° | 8·1 | ,, 12th. | + | — |
| M'A——r (2). | 5 | ,, | 97°-100° | 29·56 | March 22nd. | ++ | — |
| B——y. | 34 | 13th. | 100·4°-100·8° | 7·3 | ,, 27th. | + | — |
| D——r. | 6 | ,, | 100°-104·4° | 17·0 | ,, 18th. | + | Convalescent on April 8th. |
| M——s (2). | 12 | 14th. | 98·4°-99° | 4·9 | April 10th. | – | — |
| M——e (2). | 7 | 15th. | Subnormal. | 21·1 | ,, 5th. | ++ | Convalescent on April 1st. |
| M——o. | 8 | 17th. | 98·6°-100° | 10·3 | March 27th. | ++ | — |
| W——n. | 11 | ,, | 100·4°-101·2° | 14·0 | ,, 15th. | + | Convalescent on April 3rd. |
| T——y. | 3 | 19th. | 100·6°-102° | 4·7 | ,, 27th. | + | Died on twenty-ninth day. |
| M——y. | 17 | 20th. | 100·2°-100·4° | 16·5 | ,, 23rd. | + | Convalescent on April 3rd. |
| B——y (2). | 34 | 21st. | 98·2°-98·6° | 22·0 | April 4th. | ++ | — |
| W——n (2). | 11 | ,, | 99·2°-100° | 9·5 | March 19th. | + | Convalescent on April 3rd. |
| B——d. | 4 | 24th. | 99°-101·2° | 7·0 | ,, 21st. | + | Convalescent on March 29th. |
| B——d (1). | 16 | 25th. | Subnormal. | 4·3 | ,, 20th. | – | Convalescent on March 21st. |
| B——d (2). | 16 | 27th. | ,, | 5·0 | ,, 22nd. | – | Recovery complete. |
| B——y (3). | 34 | ,, | 97·4°-97·8° | 5·4 | April 10th. | + | — |
| M——n (1). | 6 | 33rd. | Subnormal. | 9·0 | March 11th. | + | — |
| R——y. | 9 | ,, | 97 0°-99 2° | 7·0 | ,, 18th. | + | Convalescent. |
| M'K——a. | 5 | 37th. | 97·2°-98·6° | 6·4 | April 10th. | + | Meningococcus isolated by spinal puncture by Professor Symmers; meningococcus isolated from blood by Dr. Wilson. |
| C——y. | 3½ | ,, | Subnormal. | 1·6 | March 20th. | – | Convalescent on March 10th. |
| D——n. | 13 | 39th. | ,, | 4·4 | ,, 21st. | – | Convalescent on March 17th. |
| M——n (2). | 6 | 45th. | ,, | 9·1 | ,, 23rd. | + | Convalescent on March 15th. |
| N——n (1). | 12 | 47th. | 101°-98° | 7·5 | ,, 9th. | + | — |
| N——n (2). | 12 | 58th. | 100·2°-98° | 17·6 | ,, 20th. | + | Convalescent on March 21st. |
| N——n (3). | 12 | 60th. | Subnormal. | 21·7 | ,, 22nd. | + | Recovery complete. |

In only a limited number of these patients were cultures made from the cerebro-spinal fluid or blood. The positive results are given in the column headed "Remarks."

the very high opsonic effect found in preparations containing the serum from all cases of the disease on or after the sixth day and in several cases before this date, such preparations always showing leucocytes packed with cocci and also dense clumps of cocci not yet ingested. In fact, the picture is so characteristic that a diagnosis could in the majority of cases be made by simply mixing some washed corpuscles, serum from the patient, and meningococci, and incubating the mixture for a short time without the use of any control. Usually opsonic determinations for purposes of diagnosis require most careful and accurate counts, while in the case of this disease a glance at the preparation is usually sufficient.

4. From the very definite nature of the results obtained it would seem likely that this method will prove of value: (*a*) in diagnosing sporadic cases of the disease; (*b*) in settling the etiology of posterior basic meningitis in infants; and (*c*) in determining the nature of a doubtful coccus. In the presence of an epidemic it will always be possible by this method to decide whether or not a coccus isolated from a case is the true meningococcus. Several pathologists are of opinion that some strains of the meningococci may be Gram-positive. This test would, we believe, definitely settle the nature of such a coccus. In this epidemic two Gram-positive cocci isolated from the blood and one from the cerebro-spinal fluid proved not to be meningococci when tested by this method, although at first sight they closely resembled it.

5. Two of the main elements on which the process of immunity in this disease depends are the opsonic and agglutinative powers of the serum. A therapeutic serum therefore having no opsonic or agglutinative power on the meningococcus could not be expected to have much value as a remedial agent in this disease. Several samples of serum on the market were tested by us and found to have neither opsonic nor agglutinative power. This result corresponds with the experience of their use in the present epidemic, as Dr. A. G. Robb, who had charge of the majority of the patients, has observed up to the present no good effects from the use of these sera. It may, however, be mentioned that the opsonic power disappears fairly rapidly and that a serum active when freshly prepared would soon lose its potency in this respect. From a few tests which we have applied it would seem that this opsonin is very thermolabile and that a large thermal destruction even in the case of high opsonic sera derived from cases of the disease occurs by exposure to a temperature of 60° C. for 10 minutes.

We are much indebted to Professor Symmers, in whose laboratory this investigation was carried on, for the facilities he placed at our disposal and for providing us with suitable cultures of the meningococcus. We are also indebted to Dr. J. A. D. Radcliffe for assistance in the work.

We are anxious to examine the blood of cases of sporadic meningitis or of posterior basic meningitis in infants in districts where there is no epidemic of cerebro-spinal fever, and should any of the readers of this paper be able to furnish us with samples of the blood from such cases we shall feel greatly obliged and acknowledge the source of such samples in any future communications on this subject.

NOTES ON

# A CASE OF OSTEITIS DEFORMANS, AND AN ACCOUNT OF THE SKELETON OF A TYPICAL EXAMPLE.

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THE following case is a typical example of the disease which Sir James Paget[1] originally described, proposing for it the name osteitis deformans.

The patient, a carpenter, aged 57 years, married, was born in Kent and had always lived in that county. He was admitted into the Royal Mineral Water Hospital, Bath, in March, 1906, under the care of Dr. Preston King, through whose kindness I am enabled to report the case. He was said to be suffering from "rheumatism." The pains complained of were chiefly in the arms and legs and round the hips, and according to the patient's statement were more in the "muscles and sinews" than in the bones or joints. These pains began three or four years previously and at times were severe enough to prevent him sleeping. His legs had become bowed within the last four years and he had become shorter in stature in consequence. When a young man he was "inclined to be knock-kneed," and friends who had not seen him for some time were so struck by the alteration in his appearance that they asked him if his legs had been broken. When questioned he said he thought his head had got a little bigger, but it seemed doubtful whether he had really noticed any difference. There had never been any pain in the head. He had had no previous illnesses and had never been laid up in bed. He had never had any venereal disease. There was no history of gout in his family.

When in hospital the patient's height was 5 feet 2 inches in his socks; he thought it used to be 5 feet 4½ inches, but was not sure. His head was large and rounded posteriorly, so as to have an ovoid shape. The resemblance that this part of the skull bore to the large end of an egg was increased by baldness in this situation. The hair on the top of the head was thin, dry, and scanty. No local thickenings of bone could be made out. The circumference of the head was 57·5 centimetres, or 5·5 centimetres greater than normal. The naso-occipital arc measured 39 centimetres, or 7 centimetres more than normal, whilst the binauricular arc measured 34·5 centimetres, or 2·5 centimetres more than normal, so that the increase in size seemed to be chiefly antero-posteriorly and in that part of the skull behind the ears.

FIG. 1.

Front view of patient on admission.

The normal measurements are given by Peterson as follows:—

| | Average of normal male skull. | Limits of physiological variation. |
|---|---|---|
| Circumference... ... ... | 52 cm. ... ... | 48·5—57·4 cm. |
| Naso-occipital arc ... ... | 32 ,, ... ... | 28·0—36·0 ,, |
| Binauricular arc ... ... | 32 ,, ... ... | 28·4—35·0 ,, |

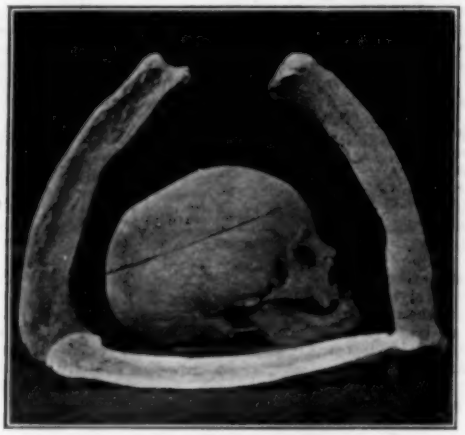
[1] Transactions of the Royal Medical and Chirurgical Society, vol. lx., p. 37.

The chest was flattened in front but wide antero-posteriorly and on deep inspiration was raised as a whole, expansion being very slight. At the level of the nipples it measured in full inspiration 33 inches and in forced expiration 32 inches. The normal curvatures of the spine were diminished rather than increased and the spine was only a little more rigid than normal for his age. Both humeri were thickened and curved forwards and outwards; the bones of the forearms seemed curved with the convexity dorsal. These changes were more marked in the left arm than in the right. The bones of the hands appeared natural and there was no clubbing of the fingers. The femora were exceedingly curved outwards and forwards, the right rather more than the left. The tibiæ likewise were curved forwards and were very massive in their whole length and overhung the ankles. The antero-internal surfaces were very wide and the margins rounded. There was œdema of the shins with pitting on pressure. The curvature of the bones of the lower extremities caused a bowing of the legs so that the internal condyles were separated by three and a half inches as he stood with feet together. The distance from the anterior superior iliac spine to the internal malleolus was 31¼ inches on the right and 32¼ inches on the left.

There was a crackling grating to be felt in the knee-joints on movement. The knee-jerks were present and not exaggerated. The pupils were equal and reacted normally to light and on convergence. There was a faint systolic murmur at the heart's apex not conducted to the axilla and the heart did not appear to be enlarged. The lungs were slightly emphysematous and whilst in hospital a cough developed and a few scattered râles could be heard in the chest, chiefly posteriorly. The abdomen was short and broad and crossed inferiorly by a deep sulcus. The liver and spleen could not be felt. There were double incomplete inguinal hernia and a hydrocele on the right side. The superficial lymphatic glands were not enlarged. His speech was slow and monotonous and his gait clumsy and waddling. The urine was clear and contained neither albumin nor sugar. The red blood cells numbered 3,416,000; the white cells 8000 per cubic millimetre. A differential count of the leucocytes showed: polymorphonuclears, 61 per cent.; lymphocytes, 24 per cent.; large mononuclear, 14 per cent.; eosinophiles, 1 per cent.; basophiles, none; and myelocytes, none. The x rays showed very beautifully the thickening and curvature of the long bones which had been discovered by inspection and palpation. The bones of the hands did not appear to be affected.

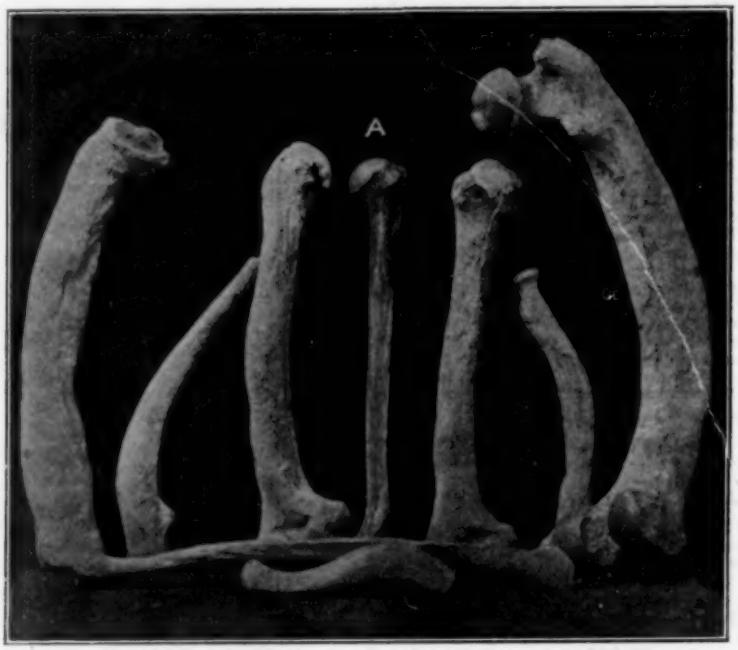
This patient's pains continued with varying severity during the seven weeks' course of hydrotherapeutic treatment that he underwent here but on the whole were not at all relieved. In a letter which I had from him in November he writes: "I am sorry to inform you that I feel the pains in my legs very much of a night; when I am lying in bed my knee-joints and

FIG. 2.



Skull and longitudinal section of tibia and humerus in the Museum of the Royal United Hospital, Bath. Typical osteitis deformans.

FIG. 3.




Bones from same collection of specimens in the Museum of the Royal United Hospital, Bath. A normal humerus, A, is photographed in the centre for comparison.

my ankle-joints ache so much so that I scarce know where to lay them."

Sir James Paget[2] in a second communication on osteitis deformans five years after his first, having in the meantime seen seven additional instances of the disease, sums up his conclusions as follows: "In all the cases I have seen the general appearance, postures, and movements of the patients have been so alike that these alone might often suffice for diagnosis of the disease. The most characteristic are the loss of height indicated by the low position of the hands when the arms are hanging down, the low stooping with very round shoulders, and the head far forwards and with the chin raised as if to clear the upper edge of the sternum; the chest sunken towards the pelvis, the abdomen pendulous; the curved lower limbs held apart and usually with one advanced in front of the other and both with knees slightly bent; the ankles overhung by the legs and the toes turned out. The enlarged cranium, square looking or bossed, may add distinctiveness to these characters and they are completed in the slow and awkward gait of the patients and in the shallow costal breathing, compensated by wide movements of the diaphragm and abdominal wall and in deep breathing by the uplifted shoulders."

Professor Osler,[3] in the sixth edition of his "Principles and Practice of Medicine," mentions that about 67 typical cases are on record and that he himself has seen four. He says the disease is characterised by "enlargement and forward projection of the head, dorso-cervical kyphosis, prominence of the clavicles, spreading of the base of the thorax, a relative increase in the width of the hips, and an outward and forward bowing of the legs"—a definition taken from an exhaustive paper on the subject by Packard Steele and Kirkbride in the *American Journal* of 1891.

Except for the absence of kyphosis and forward projection of the head the case just related agrees very well with these descriptions and may be regarded as a typical example of the disease. In the case of some of the bones the x rays showed that the thickening and curvature were greater than had been suspected, and examination in this way might be of diagnostic value in the early stages of the disease.

In the Museum of the Royal United Hospital is a collection of bones which was presented by the late Mr. R. T. Gore, surgeon to the hospital, in the year 1868, nine years before Sir James Paget published the description of his cases. These were labelled, "From a man aged 60, the subject of rickets in early life," and comprise a skull, a scapula, clavicle, two humeri, a radius and ulna, femur, tibia and fibula. They show very typically the changes wrought by the disease which now goes by the name of osteitis deformans. The circumference of the skull is 58·7 centimetres and the distance from nasion to inion over the top of the skull 36·2 centimetres. The outer surface of the bones of the skull, including those of the face, is finely porous. In the region of the bregma there is a raised keel-like thickening of bone and there is a rounded boss on the vertex in the right occipital region. The lacrymal bones are missing. There are traces on the external aspect only of the coronal suture for about one and a half inches on each side. The fronto-malar suture is distinct but the other articulations of the malar bones have disappeared. The naso-frontal and naso-maxillary sutures are fairly well marked and part of the inter-nasal remains. With these exceptions all the sutures are obliterated. A horizontal section of the skull above the temporal fossæ and three and a half inches above the inion shows that the thickness of the bone varies from half an inch at the sides to three-quarters of an inch at the occipital end and in front of each temple. Towards the internal aspect the bone is dense and white, but towards the outer table it becomes in parts loose and friable. The facial bones do not appear to be much thickened and the orbital and nasal cavities are not encroached upon, though the hard palate and interior of the orbits are rougher and coarser than natural. Inside the cranium the bones do not present the fine porous appearance but the number of nutrient foramina is greatly increased and the grooves for the arteries are much deepened. The scapula and the long bones are much thicker and more curved than normally. As an illustration it may be mentioned that each humerus weighs more than twice as much as a healthy bone of the same length and the girth of the bone at its middle is four and a quarter inches, instead of the normal two and a half. The girth of the shaft of the femur at its middle is five and three-quarter inches and the bone is so curved outwards and twisted in its long axis that the upper and lower articular surfaces face in almost parallel directions. The shafts of all the long bones are white, nodular, and massive, and present an appearance of rugged strength and hardness which causes them at a short distance to look as though hewn out of stone. The nodules are in the main smooth and rounded, but in parts, as, for instance, the upper end of the humerus, are craggy and irregular. The nutrient foramina are increased in size and on close inspection numerous other foramina are to be seen, whilst in places, especially towards the extremities, are patches where the surface of the bone is finely porous. The articular surfaces and extremities are also increased in size, but not quite in proportion to the increased thickness of the shafts. Longitudinal sections of a humerus and tibia show that the medullary cavities are very irregular and dilated, that the cancellous tissue has almost completely disappeared from the ends of the bone, and that the walls of the shaft are dense and thick. In the museum there is also a portion of one radial artery from the same man showing its conversion into a rigid calcareous tube. Sir James Paget mentions that in the first case which he described "in the arteries of the lower limbs there was extensive atheromatous and calcareous degeneration."

Bath.

[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxv., p. 225.

[3] The Principles and Practice of Medicine, 1905, Appleton.

## A CASE OF PRIMARY SARCOMA OF THE LIVER IN A CHILD AGED FOUR MONTHS.

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THE rarity of undoubted cases of primary sarcoma of the liver seems to us to warrant the publication of the present one. Arnold has recorded two and has collected the particulars of 26 other cases of possible sarcoma in the liver. The true nature of the majority of these is, however, as he has pointed out, extremely doubtful from the scanty clinical history given, and the absence in many of them of any record of a microscopical examination. Since the publication of the above article we have been able to obtain records of 11 other cases in which the examination of the tumour left no doubt as to its being a primary sarcoma of the liver.

The interest of the case recorded by us consists in the occurrence of an extensive and diffuse primary sarcoma of the liver in a child, aged four months, who was apparently healthy at the time of birth, but subsequently manifested signs of extremely rapid enlargement of the organ owing to the growth of the neoplasm, such as clinically to favour the diagnosis rather of an inflammatory condition than the development of a new growth. The history of the present case was as follows:—

A male child, aged four months, was admitted to Charteris Ward of the Royal Hospital for Sick Children, Edinburgh, on Sept. 10th, 1906, under the care of Dr. T. M. Burn-Murdoch. Swelling of the abdomen had been noticed previously for a fortnight, and although the child had been inclined to vomit since his birth, he was well nourished and healthy. He was the youngest of 12. A week before admission the abdomen was observed to enlarge rapidly and the child seemed to suffer considerable pain. He did not sleep well and constantly drew up his legs. On admission there was marked distension of the abdomen, especially in the upper part, the left hypochondriac region being somewhat more prominent than the right. The superficial abdominal veins were much distended. The temperature was normal, the pulse being 130. The abdominal circumference at the umbilicus was 52½ centimetres. An examination of the blood showed that the red blood corpuscles numbered 4,000,000 per cubic millimetre and the white blood corpuscles 24,000. There was no relative increase in any individual form of leucocyte. After admission the condition of the child became rapidly worse, the abdominal swelling increased, so that in three days the

circumference measured 57 centimetres, and was associated with severe respiratory embarrassment. The liver extended downwards into the right iliac fossa, the lower margin of dulness passing from this position upwards and to the left below the umbilicus. A well-marked notch could be felt to the left of the umbilicus, which seemed to separate the left lobe from an enlarged spleen.

An exploratory laparotomy was performed on Sept. 13th, the abdomen being opened in the right linea semilunaris, above and below the umbilicus. The liver appeared of a purple mottled colour, soft and elastic in consistence, but homogeneous throughout. A trocar and cannula were pushed deeply into the liver substance through the two incisions on the right side, as well as through corresponding incisions on the left side. The enlargement, however, was solid throughout. The child died 12 hours afterwards unrelieved of his symptoms.

The clinical history and subsequent course of the child's illness suggested the possibility of the rapid enlargement of the liver being of an inflammatory nature. The exploration of the liver at the time of operation, however, seemed to point to the condition being one of a rapidly growing neoplasm.

The post-mortem examination was conducted 20 hours after death. The body was that of a well-nourished male infant in which no rigor mortis was present. A trace of post-mortem lividity was evident over the dependent parts of the trunk and limbs. The abdomen was very much distended. The subcutaneous fat was normal in amount and appearance. On opening the abdomen a large mass, evidently the liver very much enlarged, was seen occupying the greater part of the abdominal cavity; it extended for five and a half inches below the tip of the xiphoid cartilage, reaching to within half an inch of the upper border of the symphysis pubis. In the right mammillary line it extended for six inches below the costal margin. The notch between the two lobes was situated in the left mammillary line. The spleen was not visible. The thoracic cavity was encroached upon, the upper limit of the diaphragm reaching to the fourth interspace in the right lateral sternal line. The serous covering over the anterior aspect of the right lobe of the liver was ruptured transversely in two places. The organ had a mottled appearance; dark livid coloured areas with darker points throughout were seen. These were of varying size and were mostly confluent. Where these areas were discrete they were seen to be separated by zones of yellow coloured tissue which possessed the characteristic appearance of liver substance which had undergone an advanced fatty change. On removing the organ it was found to have a uniform firm consistence and the upper surface of the right lobe presented an area irregular in outline and of a yellow colour similar to that described above.

On section the organ was found to be of a firm fleshy consistence. On examination the mottled appearance apparent on the surface was found to be explained by the presence of numerous nodules varying in size from that of a shilling to that of a crown piece. These possessed a central darker area of soft consistence which appeared to be due to hæmorrhage, and outside this a peripheral border of a slate grey colour with numerous red vascular points throughout it. The amount of liver substance recognisable on section was scanty, and this was evidently undergoing a fatty change and was being invaded and compressed by the surrounding nodules which were confluent in the greater part of the organ. The gall-bladder contained thin fluid green bile and the larger biliary passages showed no evidence of disease.

The thoracic viscera were found on examination to be healthy. The spleen was of normal size, structure, and appearance. The kidneys, except for the presence of some cloudy swelling of the tubules, appeared healthy. The pancreas and remaining abdominal and pelvic organs showed no evidence of disease. Examination of the cranium showed at the left inferior extremity of the anterior fontanelle a small nodule of the size of a pea situated in the diploë. The outer table of the skull was thinned over it, the inner table being also eroded considerably but not perforated. The contents of this cavity were of an opaque white colour and of a cheesy consistence. There was a slight increase of fluid in the subarachnoid space. The brain showed no evidence of disease on dissection. The lymphatic glands and bone marrow showed also no evidence of disease. At the conclusion of the post-mortem examination it appeared that the case was one of primary sarcoma of the liver of extremely rapid growth, with possibly a secondary focus of disease in the diploë of the skull.

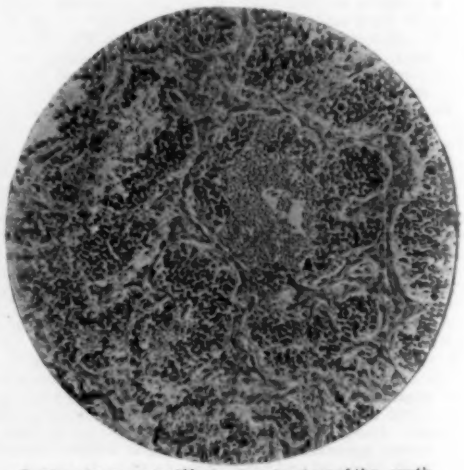
Microscopical examination showed the structure of the liver to be entirely absent throughout the greater number of the portions of that organ examined. The nodules of apparent new growth were seen to possess a stroma of delicate blood-vessels and fibrous tissue, with here and there a degenerating liver cell present and proliferating bile

FIG. 1.

Section through the right lobe of the liver showing the nodular appearance on the cut surface. The numbers to the left are a scale in inches.

capillaries. In the spaces formed by the stroma numerous small cells were present. These were irregular in outline, being usually somewhat spherical and possessed a large deeply staining nucleus which occupied the greater part of the cell, the membrane of which could be made out only faintly. Between the cells a delicate fibrillary substance was apparent. In the centre of the space it was as a rule

FIG. 2.



Section of tumour (× 100) showing structure of the growth.

customary to find numerous red blood corpuscles with an occasional polymorphonuclear leucocyte and lymphocyte lying free. At certain areas hæmorrhages larger in size could also be seen. Evidence of active cell division was also very apparent, many tumour cells being seen in various stages of mitosis. No abnormal variety of cell division could be

detected. At the outer margin of the nodules the cells of neoplasm extended by direct intercellular spread between the surrounding liver cells, the majority of which showed very advanced fatty infiltration and degeneration.

A microscopical examination of the other organs showed nothing especially noteworthy except in the case of the kidney, where the convoluted tubules and the ascending limbs of Henle showed cloudy swelling of their parenchyma. The glomeruli were swollen and contained a recent fibrinous exudate. Swelling of the endothelial lining of Bowman's capsule and an increase in the number of nuclei of the glomerular tuft were also apparent. The microscopical examination of the minute pea-like nodule in the diploë showed it to consist of cells which from their structure and arrangement indicated a chronic inflammatory focus with commencing caseation in its centre, such as would be explained by the effect of tuberculous disease. The microscopical examination of the liver confirmed the diagnosis made at the post-mortem examination of primary sarcoma.

The extreme rapidity of the growth of the neoplasm had been responsible for the retention of many of the interlobular septa and the formation of the stroma described thereby. The hæmorrhage present in the majority of these alveolar spaces is readily capable of explanation on the same ground. It is of interest that, despite the extreme rapidity of growth and the presence of many tumour cells inside blood capillaries in the liver, no secondary metastatic foci could be detected on careful examination by the naked eye and microscope. Whether the changes present in the kidneys indicative of a recent acute toxic absorption are to be explained merely as the result of a terminal infection or are due directly to the products of the neoplasm we do not at present intend to discuss. The appearance of the cells forming the tumour suggested that they were derived from connective tissue and their point of origin had been intralobular, the tumour being thus a true sarcoma and not, as de Haan has suggested, an endothelioma.

The points of interest in this case deserving special note are as follows. The occurrence of a primary round-celled sarcoma of the liver in a child aged four months. The rapid enlargement of the organ, as shown by an increase in the abdominal circumference at the umbilicus—an increase of 4½ centimetres taking place in three days. No associated emaciation, diarrhœa, or vomiting. A marked degree of infiltration of the whole organ by the neoplasm, the few liver cells which remained being in an extreme degree of degeneration. Jaundice and ascites were entirely absent. The late appearance of the clinical symptoms with such gross pathological changes is of interest.

So far as we have been able to ascertain only two recorded cases exist of this condition in children younger than the patient in the present case—namely, those of Heaton and Hewlett, whose patients were aged eight weeks and 14 weeks respectively. The clinical characteristics of these correspond very largely with the present case—namely, rapid enlargement of the liver associated with no other signs or symptoms. Necropsy in both cases revealed diffuse infiltrating sarcoma of the organ. Another case has been recorded by Lendrop, in which the child was four months old. It was also characterised by rapid development of abdominal swelling due to enlargement of the liver, which post mortem was found to have the appearance and structure very similar to that recorded by us. In his case, like the present one, the abdominal enlargement took place with special rapidity in the last two weeks of life.

Another case has been recorded with great accuracy and detail by de Haan. The age of the child was, like that recorded by us, four months. The clinical signs and symptoms were almost identical with those of the present case, the child being admitted with marked abdominal swelling. The liver could be palpated with ease, the lower border extending to the umbilicus. Extreme rapidity of growth took place after the child's admission to hospital so that the enlargement extended into the right iliac fossa in a fortnight. During this period, also, pressure symptoms on the diaphragm and thoracic viscera supervened. Exploration of the liver was carried out as in our own case, in the supposition that the enlargement might be due to the presence of an acute inflammatory condition. The child died four days after operation, the post-mortem examination revealing a diffuse neoplasm of the liver with no secondary deposits throughout the body. Microscopical examination showed numerous hæmorrhages, large thin-walled blood-vessels supported by connective tissue forming spaces filled by tumour cells, which he believed to be of endothelial or connective tissue origin.

The other cases, recorded by Bossowski, Tooth, Pert, Dudgeon, and others, occurred in older patients. The clinical characteristics of these correspond closely with those already referred to in the rapid increase in the size of the growth. Ascites, however, was present in one case, while a trace of jaundice was present in another. In only five of these recorded cases was, as far as can be ascertained from the literature, the lesion entirely confined to the liver.

The investigation of this case seems to show that from the clinical standpoint primary sarcoma of the liver in children, although of rare occurrence, presents definite characteristics, which, although simulating an acute infective condition of that organ, are sufficiently distinctive to warrant a diagnosis of a malignant condition being made.

Our thanks are due to Dr. Burn-Murdoch senior physician to the hospital, for permission to publish this case, also to Dr. R. J. Mackessack, resident physician, for the photograph taken at the post-mortem examination.

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Edinburgh.

## NOTE ON THE LIFE CYCLE OF THE PARASITE OF SLEEPING SICKNESS.

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AND

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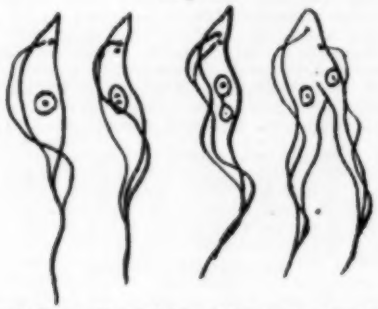
THE observations upon the life-history of trypanosomes to which we desire to call attention in this preliminary note relate chiefly to *Trypanosoma gambiense*. But in order to bring them into their true perspective it is desirable to refer briefly to certain facts already more or less familiar in relation to several other forms. In the case of dourine it is known that the disease can be transmitted directly from animal to animal, contact in this case being the normal mode of transmission. It is clear, therefore, that the life-history of any particular trypanosome need not be necessarily complicated by any transmission through two or more different hosts. The observations of Bruce seem to show that in the case of *Trypanosoma brucei* infected flies cease to be able to infect after 48 hours and it consequently follows that in this instance it is at least possible that transmission is only effected directly as in an ordinary inoculation experiment. *Trypanosoma gambiense* can be transferred directly from animal to animal for many years, the strain utilised in the present work having been propagated artificially for two and a half years. Consequently, if the sexual stage exists in the body of some other host, this stage can be altogether dispensed with for a countless number of generations.

In rats infected with *Trypanosoma gambiense* the disease runs a fluctuating course with respect to the number of parasites to be found upon examination of the peripheral blood. During its course there are a succession of periods when no trypanosomes are to be found in the blood at all. If the blood of rats infected with *Trypanosoma lewisi* be filtered through a Berkefeld filter it has been found to be capable of infecting other rats into which it is injected; though not conclusive in itself, this last observation directly suggests the presence in the infected animals of some minute form of the parasite not hitherto elucidated. During the phases of the infection of rats with *Trypanosoma gambiense* when the number of the parasites is *rising* in the peripheral blood we have encountered only amitotic division of the macro- and micro-nuclei, this process being accompanied by longitudinal fission of the animals. The double and unequal individuals produced, although often at

first sight suggesting conjugation, we find to be much more readily explained as stages in the simple process of bipartition, no nuclear changes being seen at all suggesting conjugation as it appears in other protozoa.

In the case of *Trypanosoma gambiense* we are unable to distinguish any marked dimorphism—the so-called males and females of many authors, Prowazik, Minchin, and others, appearing to be arbitrarily chosen extremes in a continuous series of dimensions. As the increase in the number of trypanosomes in the blood proceeds towards any particular maximum we have encountered no other phenomena than that of fission worth recording. At the height of the

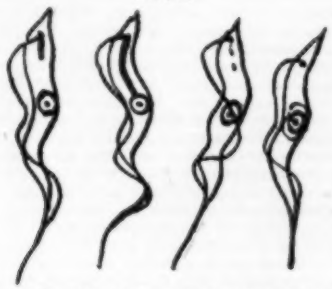
FIG. 1.



Stages in the growth and division of *Trypanosoma gambiense*.

maximum, on the other hand, numbers (from 5 to 20 per cent.) of trypanosomes may be found wherein a thick stainable band may be seen growing out from the micro-nucleus and extending through the animal's body towards the nucleus. It is at least twice as thick as, and quite distinct from, the stainable margin of the undulating membrane. This band extends backwards until it reaches or even passes beyond the nucleus. In some cases it enters directly into contact with the nucleus. In other cases it reaches the nucleus only indirectly, after passing round one or other side of this body. At this stage of the

FIG. 2.



Stages in the formation of the "black line" and the "resistant body."

increase of the parasites in the peripheral blood the nucleus and the micro-nucleus thus become connected; at a subsequent period the connecting band disappears.

At the time the number of parasites in the blood is falling rapidly another series of phenomena may be encountered in the lungs, spleen, and bone marrow. Here we find trypanosomes in which the nuclei are surrounded by a clear space with a distinct margin encircling the nucleus. Along with these we find in the bone marrow and the spleen numbers of forms in which the body of the trypanosome has disintegrated and the flagellum, together with the remains of the micro-nucleus, is detached. The nucleus in these stages, together with the surrounding hyaline substance, however, remains intact. During the absence of the trypanosomes in the blood these bodies, which we term "resistant forms," undergo no further change. They undoubtedly correspond to the bodies figured by Plimmer and Bradford and erroneously regarded by them as the nuclei of a plasmodium. So, also, they equally unquestionably represent the so-called "free nuclei" described by Holmes[1] and apparently correctly regarded by him as a stage in the development of *Trypanosoma evansi*. During the negative period of the infection they appear to decrease in size, but at the time of the reappearance of the trypanosomes in the blood they are seen, however, to have grown considerably. At this

FIG. 3.

Development of the "resistant body."

period the nucleus of each resistant form buds off a small, micro-nuclear granule and from this at a later stage there grows out a flagellum.

It appears, then, that from the spore-like resistant bodies, produced after the connexion of the macro- and micro-nuclei, small trypanosomes are formed directly and thus the life cycle begins over again. Starting from the resistant form the micro-nucleus originates from the macro-nucleus, and in the subsequent division (whereby both kinds of nuclei are indefinitely multiplied) there is a process which may be analogous to the separation of two kinds of nuclei destined to conjugate. A pair of such differentiated nuclei is retained in each trypanosome and unites during the period when the number of parasites in the blood is at a maximum. Viewed in this way the formation of the stainable band and the ensuing union of the substance of the macro- and micro-nuclei may correspond to a sexual act. In the parasite of sleeping sickness we have a life cycle which appears to be complete within the body of one animal just as in the instance of dourine. In this way it appears to be suggested that contagion may be only effected by a mechanical transference of blood in accordance with the results of Bruce in relation to *Trypanosoma brucei*.

Finally, we find when rats infected with *Trypanosoma gambiense* are treated with atoxyl that although large numbers of the parasites are rapidly killed, some become rounded, form a distinct membrane, throw off the flagellum, and apparently remain unchanged for a prolonged period.

It will be observed that the present observations upon *Trypanosoma gambiense* open up a wide field for further inquiry; but it should be pointed out that for these studies we have found it necessary to depart from the usual method of making dry preparations, and to utilise a mode of procedure whereby blood films, or "organ-smears," are fixed wet and afterwards stained and mounted in the usual manner.

The figures are from specimens fixed in Flemming's fluid and stained with a modification of the ordinary iron-alum hæmatoxylin, or with a combination of two basic stains.

## ON THE EFFECT OF THE EXPOSURE TO TOBACCO SMOKE ON THE GROWTH OF PATHOGENIC MICRO-ORGANISMS.

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THE belief that smoking decreases the risk of contracting the infectious diseases is so widely held that all whose work provides opportunity for meeting men exposed to the danger must have noted the hurried lighting of a pipe or cigar immediately after any such exposure. One is appealed to frequently to give an opinion as to the efficiency of the procedure and as some references in medical literature gave vague support to the belief, I began a series of experiments

[1] Journal of Comparative Pathology and Therapeutics, 1904, p. 213.

to determine the bactericidal power of tobacco smoke. I am indebted to Professor S. Delépine for the helpful suggestion that it would be well to compare the effect of smoke from some dried vegetable matter not containing similar toxic organic bodies; hay was selected for the control experiments. I may say at once that the smoke from both tobacco and hay was found to be bactericidal. The apparatus used will be readily understood from the illustration. A is a large pipe bowl. B is a sloped nutrient agar tube with a side tube let in and during the experiment a perforated rubber bung with glass tube replacing the cotton-wool plug. After the experiment the rubber bung and the rubber tube shown attached to the side tube were removed and replaced by sterile cotton-wool plugs. C is a large glass syringe used to draw air through the apparatus.

The method of experiment was as follows. A tube such as shown in the illustration and a plain nutrient agar tube

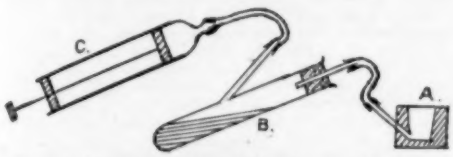


Diagram of arrangement for aspirating tobacco smoke over a culture.

as a control were inoculated from the same pure culture. A having been filled with the substance to be burned, the rubber tubes were connected and a light applied to A. The syringe was then worked and smoke came readily through the tube B. A timed exposure, five minutes, of the inoculated tube to the smoke having been given, the rubber tubes were disconnected, cotton-wool plugs replacing them, and the tube B and the inoculated control tube were placed in the incubator and observed.

There may seem at first sight considerable danger of air contamination. This, as a matter of fact, only occurred once. The organisms tested were: bacillus diphtheriæ, bacillus typhosus, bacillus coli communis, staphylococcus pyogenes aureus, and on one occasion a streptococcus isolated from the blood of a case of scarlet fever. All the experiments were repeated five times, with the exception of those on the streptococcus. The tobaccos used were of different kinds from a cheap navy cut to one of the more expensive mixtures. No difference was observed in their action. They were well dried and about one-twelfth of an ounce was used for each tube. The exposure of each tube was five minutes. All the control tubes grew typically and when growth occurred in the smoked tubes films were made and the organism examined to eliminate error from contamination.

The results observed in the smoked tubes may be summarised as follows:—1. The bacillus of diphtheria was always markedly affected. Sometimes it failed to grow at all, but in some cases there was a slight growth. This was the case both with the tubes smoked from tobacco and with those smoked from hay. 2. The typhoid bacillus grew but very much less than in the control tubes. In some instances there was no macroscopic growth at the end of 24 hours. 3. The bacillus coli communis grew fairly well though distinctly less than the control tubes. 4. The staphylococcus pyogenes aureus was hardly affected except in one experiment with smoke from hay. 5. In the experiment made with a streptococcus no growth took place in the smoked tubes. I have therefore come to the conclusion that tobacco smoke as drawn into the mouth is very probably detrimental to the growth of some pathogenic organisms, but not more, indeed rather less so, than smoke from other sources. I should like to make it clear that I state this simply as a fact observed and not as an argument in favour of the use of tobacco.

The following paragraph from Rideal's book[1] on disinfection refers to experiments on the subject. "It is recorded that Tessinari found that tobacco smoke, on being passed through tubes containing a nutrient gelatine and pathogenic germs for from 10 to 30 minutes destroyed the bacilli of Asiatic cholera and of pneumonia. Tobacco smoke passed through water killed the yellow bacillus." Trillat[2] has made a very large number of experiments on the disinfecting power of various smokes, including that of tobacco. His work has been chiefly chemical. He attributes the action to formaldelyde, the smoke from 100 grammes of tobacco yielding 0·063 gramme of formaldehyde. Cigars gave a much higher result—0·118 gramme from the 100 grammes. I have recently come across an interesting pamphlet[3] written 50 years ago, the writer of which writes enthusiastically in favour of tobacco, and in his introduction asks: "Shall we seek and ultimately find an explanation in the undoubted existence of countless millions of microscopic animalculæ which surround and penetrate us on all sides—agents of disease, whose more visible congeners we so easily exterminate for a time by the aid of fuming narcotics, especially tobacco?" The introduction to the pamphlet is a very spirited reply to a paper condemning the use of tobacco by Mr. Solly in THE LANCET of Feb. 10th, 1857.

I am much indebted to Professor Delépine for his suggestion, and to Dr. A. Knyvett Gordon, medical superintendent of Monsall Hospital, Manchester, for permission to use the hospital laboratory and publish the results.

Manchester.

[1] Disinfection and the Preservation of Food, by S. Rideal, 1903, p. 255.

[2] Annales de l'Institut Pasteur, 1905, vol. xix., p. 722.

[3] Tobacco: Its History, Cultivation, Manufacture, and Adulteration, by Andrew Steinmetz, 1857.

# THE USE OF ANIMAL BLOOD SERUM IN SURGERY: PRELIMINARY NOTES.

BY W. STUART-LOW, F.R.C.S. ENG.,

ASSISTANT SURGEON TO THE CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, AND JOINT TEACHER OF PRACTICAL OTOLOGY, POLYCLINIC COLLEGE.

FOR some time I have been employing a method of dressing wounds that has long passed from favour with surgeons—viz., the use of oiled silk as a dressing coming into intimate contact with the healing surface. If the healing process is hanging fire and the wound is ready to heal but will not, either from some surface sepsis or from mere sluggishness of circulation and healing action, it is remarkable how soon with the immediate oiled-silk dressing improvement begins. I have watched this over and over again. In one of the first cases in which I resorted to the oiled-silk dressing the change for the better was very marked indeed. A young man on whom I had performed an extensive operation for acute mastoiditis, opening a large Bezold's abscess low down in the neck, made a very satisfactory recovery up to a certain point. The mastoid bone had been nearly completely ablated, with the result that at the end of three weeks a very large and deep excavation remained, which stubbornly refused to heal over, and where healing did occur it rapidly gave way again every few days. On applying the oiled-silk dressing the parts rapidly came under healing action, with a result that in a week what had been quite recalcitrant to every agent used was completely healed over with sound cuticle.

A number of such cases impressed me very much. In endeavouring to explain the reason why I came to the conclusion that it must be the blood serum (or lymph) and the assistance given to the surface circulation. Dry dressing in contact with a healing part absorbs the normally exuding serum and becomes adherent to the growing tissues, and thus blocks the exudation and therefore the surface circulation and dries the granulations. The oiled silk does not, but allows a constant exudation of serum from the surface vessels, and being itself non-absorbent keeps the wound always bathed in serum. Such a surface serous bath prevents sepsis and aids superficial circulation in the healing region. In the one case the growing tissues are continuously having the blood serum sucked from their surface, whereas in the other case this is not so, there being always a layer, even though sometimes only a thin one, of blood serum maintained upon the healing area. It is proverbial in surgery that too dry wounds do not mend well and this, I venture to think, is the explanation. One naturally asks why such a dressing as an oiled-silk protective ever went out of favour but the reason is not far to seek. It cannot stand sterilisation by boiling or immersion in spirituous or strong antiseptic solutions, and it therefore soon fell under the ban of most surgeons. I simply wash the protective in sterilised water or in boric solution before applying it over the wound; it is not necessary to do more, because the blood serum and lymph that rapidly collect under it keep the wound sufficiently aseptic.

Having observed and reflected upon these facts about wounds and studied the theories on opsonins and the wonderful practical application of them by Sir Almroth E. Wright, I argued thus. If so much depends upon the blood serum, why not try to increase the amount of it in and about healing parts by employing animal blood serum as the fluid with which to sluice, to irrigate, and to dress wounds? Pure healthy blood serum would seem to be ideal for this purpose, as it is essentially non-irritating and, in fact, has a soothing, cooling effect on injured parts. It is alkaline in reaction and from albuminous matters held in solution has a slight viscosity that gives it to a considerable degree air-excluding, and to a lesser degree adhesive, covering and protective properties which are all conducive to healing. It is now admitted by all pathologists, too, that normal blood serum possesses restraining influences on bacterial growth because of the antibodies it contains, and Sir A. E. Wright's researches have proved that blood serum also contains those substances which have the marvellous power of preparing micro-organisms for ingestion by the white blood corpuscles—viz., opsonins.

Here, then, in normal blood serum we have, I think, the best substance and the natural substance for perfect and rapid repair of wounds. The chief objection to even mild antiseptics has ever been that they have always some degree of irritative and devitalising effect on the tissues and there is no certainty that micro-organisms are destroyed by their action. Indeed, there is little doubt but that the beneficial action of some antiseptics, and probably also of some aseptics, such as normal saline solution, consists in the fact that they do irritate the tissue and in this way ensure an increased outflow of serous fluid and stimulate the circulation about the healing parts. To supply the blood serum without applying the irritant ought to be better. But the researches of Sargent and Dudgeon have shown that wounds healing by first intention are not bacteria free, and it is quite possible that certain micro-organisms may be necessary to perfect union. Therefore, such a substance as blood serum, which inhibits but does not arrest all bacterial growth, would seem to be the most suitable.

For the purpose of putting these views to the test I obtained a quantity of fresh blood from the butcher, which had been poured directly from the incised aorta of a young, fat, healthy, two-year-old sheep into sterilised vessels. The blood was kept in air-tight glass jars for two days and, coagulation having taken place, the blood serum was then drawn off and secured in smaller sterilised glass air-tight jars. I am still doubtful how long to leave the serum in contact with the blood-clot, but the longer they remain together the darker the serum becomes, which is doubtless due to the hæmolytic action of the serum on the red blood corpuscles. I think what I have found to be the best serum for my purpose has been that which I syphoned away from the clearer collection at the top of a tall cylindrical vessel. I now have a supply of fresh blood every three days, and remove the serum every other day into the smaller, more portable, glass jars which I carry with me to operations. If the success of others employing blood serum is as great as in the cases in which I have employed it, it may be that in the future normal serum may prove as useful and be as commonly placed ready to hand in our operating theatres as normal saline solution is at present.

It is mostly in ear cases that I have used blood serum. It seems particularly well suited for such, as there is so much bone excavation which leaves a dry as distinguished from a weeping wound. Desiccation in a wound is generally inimical to ready repair and this has been successfully avoided when blood-serum dressing has been employed. In every instance the soft structure healed by first intention. There was a singular absence of pain all through the time of recovery and the epidermisation in the ear cases seemed to proceed more quickly than usual.

Welbeck-street, W.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The annual general meeting of this association will be held in the rooms of the Royal Medical and Chirurgical Society, 20, Hanover-square, London, W., on Tuesday, May 7th, at 4 P.M. Tea and coffee will be provided at 4.30 P.M. At 5 P.M. a meeting will be held, open to all medical practitioners and students on presentation of visiting card, at which Professor G. Sims Woodhead, president of the association, will give an address on the Medical Justification of Total Abstinence.

# THE BALNEOLOGICAL TREATMENT OF URINARY DISEASES.

BY DR. OSCAR KRAUS.

*(Concluded from p. 1153.)*

I WILL now deal with the question, when can Carlsbad treatment promise a success and when ought surgery to assert its rights. The answer is not difficult. The progress in Roentgen technique has now made it generally possible, except in cases of very obese persons, to locate even small stones, especially if a compression-cylinder be used. The largest calculi that we ever saw passed through the natural passages in an attack of renal colic were of about the size of an almond (they are still in our possession). These were passed by a woman. Whether still larger stones have by any means a favourable chance of traversing the urinary passages without stoppage is questionable. At any rate, in the case of a man we should consider an operation indicated as soon as this size seems from the reduced radiogram to be considerably exceeded, or if the general symptom-complex seems to demand removal of the stone. If the Roentgen examination be negative, or if the calculi be no larger than the size given above, it is proper to try the Carlsbad method. This treatment is by all means indicated *after* an operative procedure, in order to flush out the smallest particles, which can never be completely removed at a nephrotomy—particles like the gall-sand at a gall-bladder operation. The treatment is indicated after operation for the additional purpose of combating the catarrh of the urinary passages, especially that of the renal pelvis, and thus to guard against a new stone formation around the secreted mucus as a nucleus. Moreover, the influence of the basic water in the urinary acidity, when the case is of the acid variety, is to be desired. But even where this factor is not present, as in cystin stones, we may often note the useful effect of the mechanical washing-out of the particles. I well remember a patient several years ago on whom Zuckerkandl had done a nephrotomy; she came from the sanatorium directly to Carlsbad and there passed large quantities of cystin sand and made a quick recovery.

We now come to the discussion of a class of patients who are continually being sent to Carlsbad—namely, those with stone in the bladder. Such patients ought to be sent to a mineral spring *after* a lithotripsy or a section has been already performed, and as soon after as they can be moved. Nowhere else will they so quickly lose the cystitis which is usually present, nowhere will they recover so rapidly, as under the hygienic *régime* and in the open-air treatment of a watering-place of this kind. The stimulation of urinary secretion and the regulation of the digestion never work so quickly and so beneficently as in these cases. Such patients are the most grateful that we see at Carlsbad, whether the concretion was uratic or phosphatic. I have in every such case observed a very considerable elimination of sand—urate, phosphate, oxalate, or even cystin sand. I must emphasise again that this is not only and not always a case of purely chemical processes but of mechanical and biological as well, processes which, of course, I need not here discuss. I can say but one thing with certainty: urates are not "dissolved" by Carlsbad water. Small stones are swept out and the formation of new calculi prevented by the increase in metabolism. Large stones must be removed surgically, whether from the renal pelvis or from the bladder. Patients should be informed on this point, so that they will not demand the impossible. Occasionally, patients come to Carlsbad without the advice of a physician in the hope of avoiding a lithotripsy. That is, of course, foolish. The stones, as we have said, cannot be dissolved. But when the stones are moveable, such a one may become impacted as a result of the long walks or of the railway journey itself. The same is true of kidney stones. I shall never forget a case of a young man who was sent to Carlsbad a few days after an attack of renal colic and before the expulsion of the stone. An hour after the departure from Vienna the stone left the bladder, but not being able to pass the orifice of the urethra it remained there until evening. I need not dilate on the sufferings of the poor man during the eight-hour journey. On his arrival I had to do a meatotomy in order to extract the almost almond-sized concretion with the forceps. Therefore one should always await the passage

of the stone after an attack of colic before a journey is allowed.

Here also belongs the case of an old man who came to Carlsbad with a calculous cysto-pyelitis. He was very wretched and debilitated, with persisting fever and hæmorrhages, and his progress toward recovery was very slow. When the cystitis had somewhat improved he passed, as he had repeatedly done before, 15 or 20 calculi, either at home or in the course of walks, and quite without difficulty or pain. These were characteristic stones from the pelvis, either perfectly round or slightly facsted. In spite of this his slight symptoms, chiefly some strangury and frequency of micturition, would not yield. Cystoscopy showed the presence of a small stone in the bladder, which I removed by means of the aspirator. It would be worth while to recommend that after every attack of renal colic the patient should be cystoscoped as soon as the slightest indication arouses the suspicion that the stone was not passed. It need not be pointed out how well these small concretions are qualified to form the nucleus of a vesical stone, particularly when, as in this case, the folds of a *vessie à porte-feuille* tend to imprison the stone. Occasionally patients with a stone are sent to a watering-place to be healed of their cystitis before operation. That is, of course, so much pains wasted, for as long as the stone is there the *fons et origo mali* is not removed and the bladder cannot be healed.[1] After operation, however, the case is quite different. As soon as patients can be moved they ought to "flush themselves out" diligently and lose their cystitis if such be present. By stimulating the peristalsis and loosening the bowels the circulatory disturbances in the pelvis are relieved; by increasing diaphoresis (with baths, &c) and diuresis the toxins are eliminated and "urinary" fever is most successfully combated.

In this connexion we come to a condition about which a few remarks are called for. This is the so-called *uric acid diathesis*—an affection which seems to have increased prodigiously in recent years. Exactly what, then, is this uric acid diathesis? I have taken the trouble to make inquiries on this point among a number of excellent physicians and surgeons for the simple reason that I have myself never seen a morbid type which would answer to this title, and I saw from their answers that they also were rather at a loss to make a definite statement. We often see the report in our uranalyses of a "heavy uric acid sediment" or "increased uric acid in the sediment," and this in the case of a patient who has nothing wrong with him but for a few more or less imaginary complaints. The conditions governing the solubility or insolubility of certain normal urinary constituents, such as the urates, the phosphates, uric acid, are not known certainly. Why is uric acid sometimes precipitated from solutions and sometimes not? And why the phosphates? How does it happen in one and the same individual that the taking of carbonated drinks at one time causes a cloudy or milky urine and at other times not? We are only too far as yet from understanding these most intimate metabolic processes, processes which are certainly not purely or wholly brought about by chemical conditions. To be honest with ourselves we must admit that we know little more about the conditions under which uric acid is precipitated from the urine than that it happens regularly in the cold and also in circumstances which we are not able to explain satisfactorily. On this point the most trustworthy investigators are united; reference may be made among others to a piece of work by Ritter.[2] Uric acid precipitates for unknown reasons from the urine of sufferers from arthritis or other diseases, but it also often does the same in that of healthy individuals, without any increase in the total acidity or in the content of uric acid. Moreover, the uric acid often precipitates without our being in a position even to draw any conclusions from the fact. We know, in short, as little about this as we do about oxaluria and phosphaturia or about the alternation of oxaluria with uraturia or of phosphaturia with uraturia in the same person. All explanations which have been offered are unable to stand the test of criticism. We do know, however, that it is impossible to speak of an absolute or even of a relative increase in uric acid excretion without a complete examination into the metabolism based on comparative data for the same individual, and especially without taking account of the diet. To speak of "increased uric acid" in the sediment is nonsensical because we do not know the conditions of uric acid precipitation in health, or, in other words, what the "normal" amount of uric acid in the sediment is. However, what the apothecary or chemist reports as uric acid is usually amorphous sodium urate, often mixed with a few small whetstone-shaped uric-acid crystals. Practical experience has taught us that this appearance has no significance whatever, either clinically or pathologically; on this point I know that I am in agreement with clinicians of note. One of these, Dunin, to whom we owe, among many other excellent researches, that paper on the relation between habitual constipation and neurasthenia, made this very question the subject of an investigation and comes to conclusions similar to ours. Unfortunately, the paper was written in Polish and is thus only accessible in reviews.[3] The principal theses are the following: 1. The existence of an arthritic diathesis after the meaning of the French authors must be emphatically denied. 2. It is not proved that metabolism is at all slowed in diseases of this category. 3. From the superficial uranalyses as usually made in practice far-reaching conclusions, and especially diagnoses of "arthritism," are quite untrustworthy. 4. The supposition of a uric acid diathesis seems, in view of present knowledge, to be unwarrantable. 5. The significance of uric acid in the etiology of arthritis and of renal calculus is to be regarded at present as unknown.[4] Among the many cases which we have been able to follow with care during the last 18 years, we have found none where increased uric acid in the sediment had any meaning. On the other hand, we have again and again found for years before the appearance of calculi those characteristic large dumb-bells and the pointed forms of uric acid crystals to which Ultzmann in his lectures attributed a premonitory significance. We have always remembered particularly two cases where we achieved some renown as a prophet by cherishing this remark of Ultzmann.[5] But these are only the premonitory signs of gravel.

There are no objections to be made on principle to the introduction of synonymous but relevant new terms, although the clearness of the conception rarely gains thereby. We know that the coronary asthma of to-day, the stenocardial attack of yesterday, and the angina pectoris of our fathers are one and the same. And so I have myself here and there made use of the expression "uric-acid diathesis" because it

[1] Latterly, it has become rather the fashion to undertake stone-crushing operations at watering-places. I am of the opinion that this is not advisable, since such a patient should not be asked to take a long journey. Nowadays, when surgical practice is no longer a prerogative of the few elect but has become fairly general there can be found in every large city, and in many of moderate size, men who can perform such an operation faultlessly and under the best of external conditions, in good nursing homes. The patients need not be carried far, and we do not see any reason why patients should need to be in a hospital or doctor's home at a watering-place, if they can get no benefit from balneological treatment, even of the best. Allow me to speak at this point of a curious "fashion" which has lately appeared among patients with concretions—namely, that of going every year or two years to a water cure "to have their stone, which has formed again, crushed." There are, as a matter of fact, people whose excretion of urates or phosphates is so rapid that relapses do occur—after a long period, rarely after a short one. But when we hear that certain operators perform crushing operations regularly every year or two for a considerable number of their patients, we are moved to recommend them that they heed Guyon's advice and "carry the crushing to its utmost limits," and further, on no account neglect the "verifying examination" (Clinical Lectures, German edition by Oscar Kraus and Otto Zuckerkandl, vol. iii., pp. 328 and 372). If this were done their cases might show a considerably diminished number of relapses. We know that genito-urinary surgeons of prominence share our view. That it is reasonable is perfectly evident. Only small fragments can go through the aspirator or be spontaneously passed. For this reason the old Bigelow method has been losing favour, because in this the crushing is made of less importance than the evacuation. The surgeon who wishes not to leave fragments behind to cause relapses will crush the stone to the smallest possible atoms. Bladder irrigation and stimulation of diuresis will wash out the last particles, and it is just here Carlsbad may assert her rights in the after-treatment of a litholapaxy.

[2] Zeitschrift für Biologie, Band xxv., No. 17.

[3] Gaz. Lekarsko, 1900, No. 43.

[4] Cited from Ziegler-Kahlden's Centralblatt, March 28th 1901.

[5] I have spoken of one of these cases in another publication (Report of the Meeting of the Paris Académie de Médecine and Annales des Maladies des Organes Génito-urinaires: La Polliquiurie Urique, Nov. 23rd, 1897). This case was one of diabetes. Since my communication before the Académie de Médecine the patient has been obliged to have a small stone crushed. The other case was of a man who had been sent to Carlsbad on account of enlarged liver. I advised a change in his manner of living and threatened him with renal colic and vesical stone. Both made their appearance: first the colic, and two years later I discovered a stone in his bladder myself. In both cases the above-mentioned pointed uric acid crystals had shown themselves for years before. In the first case the etiology of the gravel, as is so unfortunately common, was the diabetes, the nitrogenous diet, and the lack of exercise due to an ankylosis of the hip after a fracture of the neck of the femur.

was the fashion. But I should like to propose dropping it for good and all, as we have dropped the "herpetic diathesis." They simply do not exist. But even if we do not recognise a uric-acid diathesis we do know the arthritis urica and gravel. Both lead to a deposition of urates in the organism. I described a symptom ten years ago in a communication to the Paris Académie de Médecine,[6] which I called "pollakiuria urica," a symptom which in itself may constitute a complete morbid condition. At that time I referred to the fact that the majority of persons who show crystallised uric acid in their sediments are not sufferers from pollakiuria, but that in certain cases where changes exist in the neck of the bladder region or the prostatic urethra, themselves incapable of causing a pollakiuria, the paroxysmal excretion of large amounts of uric acid, especially in the form of pointed crystals, can produce a pollakiuria of high grade. Such paroxysms of uric acid excretion are not rarely seen in patients with arthritis, and if this excretion can be made to disappear by the administration of alkalies and other proper treatment, as, for instance, at Carlsbad, this distressing symptom will disappear as well.

No less a man than Sir Henry Thompson[7] writes as follows concerning the effect of Carlsbad treatment on uric acid excretion:—

> "Now, the principle upon which the waters of the sulphate of soda group, aperient and non-aperient, are beneficial is, that they produce activity in all the digestive functions, stimulating the excretory action of the abdominal organs, so that certain waste matters, which have hitherto been thrown out as uric acid by the kidney, are eliminated in some other form. If, therefore, it is really desirable to recommend resort to a mineral spring as treatment for uric acid deposits, I should prefer Carlsbad, and certainly never send a patient to Vichy, Vals, Evian, or Contrexéville. And when a stout active man, whom it is most desirable to separate from his home engagements and business cares, requires a Carlsbad course, he may often visit the locality with advantage.

In our discussion thus far we have repeatedly touched upon the subject of *cystitis*. It is one of the most gratifying for thermal treatment. Under the influence of the drinking and bathing an acute, non-gonorrhœal cystitis usually recovers quickly without any local treatment. Those forms are especially often seen here which occur in connexion with gravel, apparently due to the insult to the mucous membrane from the uric acid concretions. Such a urine is, as is well known, acid, contains red and white blood corpuscles, pus cells, bladder epithelium in small quantities, and fewer or more of the pointed forms of uric acid crystals. Chronic cystitis with amphoteric or alkaline urine must of course be treated locally. But it is just here, and especially in the more stubborn forms, that the balneological treatment shows its value. I think it will be conceded that usually, in beginning local treatment, a physician cares relatively little for the systemic, that he confines himself to forbidding certain articles of food and drink (alcohol, spiced foods, &c.), and is usually not in a position in the city to prescribe at the same time mineral drinks and therapeutic baths. But it is most of all in connexion with chronic vesical catarrh that the value of this part of the treatment as adjuvant to local measures is under-estimated, as our practice testifies. Here the increase in metabolism performs great services—indeed, it often works miracles almost. Just what we imply by this increase in metabolism we have elsewhere discussed.

We must characterise as categorical and illogical that dogma which is too often voiced, "alkaline urine, *ergo* no alkalies, *ergo* no Carlsbad." The urine is alkaline in the "alkaline cystitis" because it contains pus and is in a state of ammoniacal fermentation. If this pus and fermentation be removed by local and general treatment the alkalinity of the urine disappears *ipso facto*, and, paradoxical as this may seem, an alkaline cystitis never responds so well as under the influence of alkalies, especially those of the sulphate springs; these open all portals for the escape of the toxins of the colon bacillus and the rest. On the principle "when all else has failed, try Carlsbad" a great number of old protracted cases of cystitis are directed to Carlsbad. The people in question are the most grateful of our patients. In this class are those forms of old chronic cystitis which need constant or very protracted treatment, which are complicated with prostatic disease of high grade, strictures, &c., and are accompanied by the remote symptoms of chronic uræmia. The *sonde à demeure* has been recommended for such cases to drain the bladder constantly. I must say that in general I am not an advocate of this method, for the permanent catheter requires the patient to stay in bed, and thus the already insufficient digestion suffers and the recumbent attitude favours hyperæmia of dependent parts, the prostate, the bladder, and the other pelvic organs. The inactivity gives the metabolism and so the impulse to recovery another set-back. Here the open-air treatment shows to advantage and we may meet the indications for thorough bladder drainage just as well if we have the patient catheterised for every micturition—i.e., at least four times daily and once or twice at night—of course, with all aseptic precautions—and allow him enough outdoor exercise to stimulate the digestion and to meet the need for fresh air, a need that should not be underrated in such cases. In this way there can be no considerable stagnation of urine and the bladder is washed once or twice daily with boric solution (or with Mühlbrunn or Sprudel water) and silver nitrate injected or instilled as well.[8] The fresh-air treatment is important for these patients, as I have already stated, so also are the baths, the massage, in some cases carefully selected light gymnastics, the *régime*, the stimulation to the digestion, and last, but not least, the flushing out of the urinary passages with sulphated alkaline waters. In the management of chronic diseases and of those of metabolism all possible curative agents must be called upon to enhance the effect of the drinking and bathing treatment.

We cannot refrain at this point from citing a remark by that keen medical thinker, F. A. Hoffmann. He says:[9] "The great value of the Carlsbad treatment, which we are constantly prescribing, is so far from clear scientifically that one would lay himself open to the charge of phantastic theoreticism if one were to say anything definite on the subject." In fact, Carlsbad practice yields results which had better be taken thankfully and without racking the brains over the *cur quo modo*.

*Hypertrophy of the prostate* is seldom the subject of treatment unless it is associated with obesity, chronic arthritis, or especially with chronic constipation. In the first stage, when periodical feelings of pressure or fulness and the irritation in the rectum are the only complaints, a simple course of drinking and bathing, or of the former alone, will benefit without other adjuncts, without even prostatic massage. Here the case is usually one of paroxysmal congestion of the gland coming on under the influence of stasis in the lower pelvic organs. As soon as order is restored by regulating the digestion the complaints disappear. In such an aseptic case the introduction of an instrument should be avoided. On the other hand, where there is a large quantity of residual urine, where the impediment to the outflow is really considerable, one cannot too industriously drain, wash, and, as Guyon expressed it, "modify" the mucous membrane of the bladder. This is no place for a dissertation on prostatic hypertrophy, but we may say this: that the greatest effort should be made to prolong the first stage, or, in other words, to put a catheter into the patient's hands as late as possible. If the operation is indicated one must not wait until ascending processes have made the prognosis unfavourable. Such processes lead to the signs of chronic uræmia, which we have already fully discussed. All these patients catch cold easily, therefore especial caution must be observed; and since a "cold" is by no means a small matter for people with chronic urinary trouble they should be sent to a watering-place only in a favourable season. In the cold spring of 1905 I had the opportunity of seeing some particularly unpleasant instances of this. I shall always remember one case of an old gentleman with a tremendous enlargement of the stomach, with atony, an old cystitis, and prostatic hypertrophy. The treatment of the last-named was being postponed on account of the wretched general condition. After starting treatment the digestion improved, the stomach-tube, a necessity hitherto, was dispensed with, and the weight increased. Everything looked bright. Then the old man caught cold and the symptoms of acute prostatic congestion came on, with fever, with exacerbation of the cystitis, which, of course, worked back on the gastritis, producing vomiting, singultus, anorexia, and prostration. The clinical picture became so threatening that I felt myself fortunate when the treatment of the

[6] Session of Nov. 23rd, 1897.

[7] Diseases of the Urinary Organs, eighth edition, 1888.

[8] The irrigations are best performed by means of the irrigator and use may well be made of a two-way tap. I demonstrated an aseptic model of such a tap in February, 1907, before the Gesellschaft der Aerzte in Vienna. It may be obtained of H. Reiner in Vienna.

[9] Von Leyden: Handbuch der Ernährungstherapie, second edition, 1903, p. 481.

bladder, which I then had to begin, had after a few days removed the imminent danger. To such cases the experienced urologist is no stranger.

This brings us to a class of patients whom Guyon denominated as "faux urinaires," which could be translated as "pseudo-urinary" cases, though the former, like many another French expression, has won its place in our urological nomenclature.[10] Guyon understands by this term "patients with symptoms which are falsely localised by them, and which indicate a really existing disease, even if in another organ (i.e., other than the urinary apparatus)." We might go further and understand a symptom-complex which can mislead not only the patient but the physician, and which may indeed imitate closely an affection of the urinary apparatus, thus leading to failure to supply appropriate treatment for the case. Perhaps one sees more of these in Carlsbad than anywhere else. To give an instance, the chronic dyspepsias with increased frequency of micturition are well known. I may mention here two cases of this type, such as are not particularly common.

A middle-aged gentleman, a professional brother, consulted me for a troublesome pollakiuria combined with pain in the urethra, and especially in the glans. Even the introduction of a Nélaton bougie caused extremely severe pain. The patient thought he had a stone and wished me to sound him. I declined, however, to make this examination, not only on account of the extreme sensitiveness of the urethra, but chiefly because the diagnosis was evident from symptoms. Even such freely explored *viae naturales* as these should not, for mere curiosity, be explored with an instrument. Against my advice, however, the patient, to whom for sufficient reasons I had not told the real diagnosis, had a sound passed by another hand—of course with negative results, for before the examination was made I had told his family that he was suffering from those vesical and urethral crises which were described by Geffrier[11] and Fournier[12] as characteristic of the pre-ataxic stage of tabes dorsalis. In this case the drinking cure and hydriatric procedures had a favourable influence on both the intestinal disturbances which were present and the course of the fundamental trouble. I have seen the patient lately and was astonished at finding how well he was doing.

This case is not exceptional; tabetics have consulted me repeatedly in the earliest stages of their disease, on account of bladder disturbances, and I have always seen good results from the above-mentioned treatment. The good effects of hydriatric procedures in tabes are well known, but I wish to emphasise especially that by means of the drinking cure in addition we may meet the symptomatic indications and influence the intestinal and vesical disturbances.

The second of these "pseudo-urological" cases was the following. A patient was sent to me five years ago with the diagnosis of nephrolithiasis. As a matter of fact, he had passed a number of uratic calculi about a year before after a typical colicky attack. But at the time that I examined him, in spite of intermittent pain in the kidney region, there was neither sand nor gravel in the urine. The type of this pain failed, moreover, to simulate that of a renal colic closely enough to give me any real cause for doubt, and, in fact, on more careful examination I found it to be a case of sciatica and one which cleared up rapidly under the administration of alkalies, massage, and mud baths (it was apparently of the uratic form). The false diagnosis had been made, of course, on the basis of the former attack of renal colic and more particularly because the pain was chiefly in the distribution of the iliac branch of the iliohypogastric nerve—that is, about in the kidney region.

Similar pseudo-renal colics may be imitated as well by chronic constipation, when deposits of hard scybala may be present in the splenic flexure, and more often by spastic constipation involving the descending colon. This frequently causes pain, often rather severe, which may radiate as far as to the right testicle, and is often increased by pressure over the splenic flexure. Appendicular and tubal colics may also be mentioned in this connexion.

There is another class of patients whom I should call "urinaires dissimulés," or concealed urological cases. They form a considerable contingent of the visitors at Carlsbad. These are people who complain of little else than digestive disturbances of various kinds, of constipation, chronic diarrhœa, anorexia, hemicrania, &c., symptoms which in reality are remote manifestations of a local affection of the urinary apparatus—i.e., of a chronic uræmia. In this character appear especially chronic nephritis and prostatic disease. These patients are in a particularly delicate equilibrium as regards health. They know that they "once had a catarrh of the bladder," but that was long ago, and they are used to it. They come to Carlsbad because of poor digestion. They have been advised to "give their bladder a complete rest for a while"—that is, not to have it treated locally! I have elsewhere reported one such case.[13] But the physician is guilty of a serious sin of omission if he does not treat such cases locally and of a disastrously wrong diagnosis if he handles them as stomach or intestinal affections. I will cite here two cases.

The first case was that of a woman who was over 60 years of age and who had from time to time for many years come to Carlsbad on account of cholelithiasis. She had been for some time under treatment by different well-known gynæcologists for a pelvic trouble. She was referred to me by her own Carlsbad physician because she had "suddenly" begun to suffer from strangury. On examination I found a prolapse of the uterus and, as often happens in connexion with it, a prolapse of the anterior vaginal wall and a part of the bladder, so that this pocket-like portion did not empty itself—like the furrows in a prostatic case. In the same way there was here a residual urine amounting to between 50 and 100 cubic centimetres. A chronic cystitis was present which the patient considered of quite trifling importance. A well-known urologist, since then deceased, had directed her to catheterise herself over a hand-mirror and occasionally to irrigate the bladder. She had done so "occasionally" if the cystitis was troubling her. This time the strangury was annoying her unusually because, as she said, she had "turned her stomach by eating bad peas." The bad peas here were a typical urinary fever, with profuse diarrhœa, almost unbearable tenesmus, nausea, &c. Her condition caused considerable anxiety for 24 hours, but finally yielded to rest in bed, great quantities of hot sprudel water, and, for the pollakiuria, cocaine applications to the vulva. As soon as the patient could get up the cystitis was treated with success. The digestive complaints were not mentioned again. A pessary relieved the retention.

The second case was that of a woman from Northern Bohemia. She took to bed immediately on arrival at Carlsbad. She had been ailing for many months and was said to have biliary sand. On entering the room one could make a diagnosis of ammoniacal cystitis by the sense of smell. Also, in this case there was urinary fever; the bladder proved again to be the *porta malorum*, and appropriate local and general treatment resulted in a disappearance of the fever and an increase in the strength. This patient had also, as a matter of fact, an affection of the liver and was jaundiced; but it was impossible to refer all the symptoms, fever, prostration, anorexia, and diarrhœa, to the biliary function. These were all remote symptoms of chronic uræmia. One must not be satisfied to refer all phenomena without afterthought to a disease that is known to exist, otherwise therapeutical signs of omission may be committed with disastrous results.

I have elsewhere called attention to the fact that a pollakiuria in *diabetes* should always arouse suspicion of a non-diabetic cause. When such a patient complains of increased frequency of micturition one should not be satisfied to ascribe it merely to the diabetes and to consider everything thus explained, but should always look for a possible other reason. Almost without exception a complicating affection of the lower urinary passages may be demonstrated, which was the source of the pollakiuria. I am convinced that, although diabetes may cause a polyuria, it never, except in the early stages, and then not as often as supposed, causes a pollakiuria, or, as Clado, before his untimely death, more properly named it, a sychnuria.

Even though a polyuria does not as a rule cause a sychnuria, the bladder accommodating itself to the greater demands on its capacity, the converse may well happen that sychnuria can cause a polyuria. Our experience leads us to agree fully with Guyon to the effect that an increase in the frequency of emptying the bladder reflexly increases the kidney secretion and conversely that the decrease or total

[10] Guyon's Lectures, German edition, by Dr. Oscar Kraus and Dr. Otto Zuckerkandl, Vienna, 1894, vol. i., p. 18.
[11] Étude sur les Troubles de la Miction dans les Maladies du Système Nerveux. Paris, 1854. Dissertation.
[12] L'Ataxie Locomotrice d'Origine Syphilitique, 1882.
[13] Congress of the Association Française d'Urologie, 1897.

relief of this abnormal frequency decreases in consequence the quantity of urine.

Of the many examples which could be given to support the above statements I mention but one. This was the case of a Parisian woman who was under our care in September, 1901. She suffered from severe diabetes, discovered in 1895, and had been treated since then with indifferent success. When we first saw the patient the excretion of sugar, in spite of strict diet, amounted to 48 grammes per litre, with a daily quantity of urine of over 3000 cubic centimetres, or a total excretion of about 150 grammes of sugar. In addition there was abundant excretion of acetone and diacetic acid and a trace of β-oxybutyric acid. The specific gravity was 1030, with an ammoniacal reaction, while in the sediment were found mucus, pus, and triple-phosphate crystals. The cystitis was a matter of years' standing and was the cause of an unusual increase in the frequency of micturition; by day the patient had to urinate about every half hour and averaged six or eight times at night; and all of this had been ascribed to the diabetes! As for other symptoms it need only be mentioned that the patient had suffered for years from chronic constipation and had lately lost much weight. I began local treatment of the bladder; the urine soon became clear and acid, with simultaneous disappearance of the sychnuria, *although the polyuria still continued*, and the sugar decreased but slowly, as a diet free from carbodydrates could not be introduced at once on account of the acetone. It was only much later that the sugar and the polyuria decreased together (daily quantity 650 cubic centimetres) and the patient gained weight.

As a *résumé* it may be said that the Carlsbad waters are particularly indicated in diseases of the urinary passages for the following reasons. 1. Because they are notably diuretic. Therefore they have an eliminative action on foreign bodies in the urinary passages, like clots, mucus, pus, or small concretions, such as can be passed out *per vias naturales*. The passages are "well flushed out." Of course, micro-organisms (bacillus coli, &c.) are also by this means washed out. 2. They have a modifying action on the urinary mucous membrane; catarrhs of low grade heal rapidly without local treatment. 3. The Carlsbad waters stimulate both renal and intestinal functions energetically and their use is thus especially indicated in those cases where so-called urotoxic substances are to be eliminated—i.e., in cases of prostatic disease, chronic cystitis, &c.—and in those cases of nephritis where the gastric symptoms prevail. 4. The regulation of intestinal activity has a direct depleting effect on the pelvic organs, bladder, prostate, &c. The venous stasis due to intestinal stagnation is mitigated, the deeper organs are relieved. The increase in volume of the hypertrophied prostate due not to secondary degenerative changes but to a congestive hyperæmia—and in every case a part is congestive—disappears as a result of the regulation of the bowels. 5. Post-operation, after nephrotomy, suprapubic lithotomy, litholapaxy: to wash out the smallest particles of sand; after prostatectomy: to alleviate the cystitis, regulate the bowels, and eliminate the toxins. 6. The Carlsbad treatment is contra-indicated in the common condition of frank urogenital tuberculosis, so frequently taken for a simple cystitis or pyelitis.

Carlsbad.

# Medical Societies.

## CLINICAL SOCIETY OF LONDON.

*Exhibition of Cases.*

A MEETING of this society was held on April 26th, Mr. H. H. CLUTTON, the President, being in the chair.

Mr. LAWRIE H. MCGAVIN exhibited two cases of Ventral Hernia through an operation-scar treated by the Implantation of Large Filigrees of Silver Wire. The first case, that of a woman, aged 38 years, presented a hernia at the site of the scar of an operation that had been done a year before, the gap measuring 5 inches by 3 inches. The whole of the old cicatrix was removed by an elliptical incision 11 inches in length. One portion of the external oblique aponeurosis was sutured to the cut edge of the posterior sheath of the rectus muscle and upon this, as a bed, a silver wire filigree, measuring 8 inches by 4 inches, was laid, the inner loops being disposed beneath the rectus muscle and the outer beneath the oblique muscles. The remains of the rectus muscle were now brought out of the sheath and sutured as far as possible to the oblique muscles over the filigree. This caused a weak spot at the middle line of the abdomen and necessitated the opening of the sheath of the left rectus muscle, which was drawn across the middle line to meet its fellow, where it was sutured. The skin and superficial fascia were closed over all by 35 Michel's clips. No belt had been worn since convalescence. The second case presented a similar condition after an operation for appendicitis. The scar had been treated in like manner and the result had been most satisfactory.—Mr. A. E. J. BARKER congratulated Mr. McGavin on his results. The method was certainly superior to any he himself had used and saved a great deal of time and manipulation. He had used interlacing wire in about 30 cases and in only two instances had it to be removed subsequently. He referred to the respiratory embarrassment which he had seen occur after the replacement of enormous hernia.—Mr. MCGAVIN said in reply that he had not had to remove the filigree in any of the 16 cases he had done.

Mr. MCGAVIN also showed a case of Inguino-scrotal Hernia in a male treated by Implantation of Filigrees of Silver Wire.

Mr. DOUGLAS DREW exhibited two cases illustrating the Use of a Filigree of Silver Wire in the Radical Cure of Umbilical Hernia.

Mr. DREW also showed a case of Habitual Dislocation of the Patella (? Congenital) in a girl, aged 13 years. The child first came under observation when six years old with severe genu valgum and dislocation of the patella when the knee was flexed. Macewen's osteotomy of the femur was performed in April, 1900. The present condition was much the same as seven years ago. On flexing the knee the patella slipped completely over to the outer surface of the external condyle, whereas when the knee was extended it lay over the external condyle. It was suggested to treat the case by dividing the capsule on the outer side of the patella so as to allow of the reposition of the bone, and by shortening up the capsule on the inner side and deepening the patellar surface on the femur.—Mr. WALTER G. SPENCER advised the removal of the patella, care being taken not to damage the aponeurosis.—Mr. DREW recalled a case operated on in the way which he now suggested by Mr. Bilton Pollard 16 years ago, with an excellent result.

Dr. F. E. BATTEN showed three cases of Acute Ataxia (Encephalitis Cerebelli). The first case, in a boy, now aged six years, had been exhibited before the society in October, 1904. In April, 1904, he vomited, had general convulsions, and passed into a comatose condition. On regaining consciousness he was wildly ataxic alike as regards his legs, arms, and trunk. From this he very slowly recovered and when exhibited before the society in 1904 was still very ataxic. He walked fairly well but was still unsteady, especially on the left leg. The articulation was still slow and hesitating. The reflexes were normal. Sensation to touch and pain was perfect. The second case was in a boy, aged 11 years, who was quite well up to April 1st. He had severe headache, vomited a whole day, and was unable to feed himself or to stand. On April 5th he tried to get out of bed and walked like a drunken man. On the 9th he had marked ataxia of both legs, some ataxia of the hand, and nystagmus on looking to the left side. There was loss of tone in the muscles of the lower limbs. The knee-jerks were active and the plantar reflexes flexor. The boy had rapidly improved, so that he now only exhibited slight ataxia in the lower extremities. The third case was that of a boy, aged 12 years, who had always been backward. For the last seven years the patient had had attacks of *petit mal*. In September, 1906, he had a series of 130 fits and was unconscious for three days. On recovery he could move his arms and legs but had no control over them and had not been able to walk since. His mental condition was poor and his articulation was slow and jerky. There was unsteadiness of the trunk and head. There was general weakness of the arms and a well-marked intention tremor was present. He could not walk without aid and his gait was wildly ataxic. Dr. Batten referred to the favourable prospect in these cases and recalled Dr. Frederick Taylor's case that made only slight improvement in the first three years but had perfectly recovered when seen 25 years later.

Mr. C. GORDON WATSON showed two cases of Modified Pirogoff's Amputation in men, aged 30 and 40 years respectively. The operation was performed in the first case for

very severe talipes equino-varus following infantile hemiplegia. After tenotomy of the tendo Achillis and subcutaneous division of all contracted tissues in the immediate neighbourhood, excision of the astragalus and amputation of the foot in front of the os calcis, removal of the internal malleolus and the cartilage from the lower end of the tibia and a small portion of the anterior extremity of the os calcis, the patient could now walk well and had a very comfortable stump.—The PRESIDENT remarked that the result of this new operation was excellent.

Mr. REGINALD H. MILLER showed a case of Encephalitis chiefly affecting the Mid-Brain. The patient was a boy, aged three years, under the care of Dr. W. S. Colman at the Hospital for Sick Children, Great Ormond-street. In October last the child was suddenly taken ill with a convulsion, in which the left side of the face was drawn up, and this was followed by three weeks' unconsciousness. When seen in November there was some weakness of the right side of the face and the right external rectus with slight lateral nystagmus. There had been inability to walk or talk, extreme emotionalism, some rigidity of the right arm and leg, and a slow tremor (about five per second) of the head and limbs, which showed more in the proximal than in the peripheral parts of the limbs and was absent only during sleep. The fundi were normal; the abdominal reflexes were absent on the right side and feeble on the left; the knee-jerks were brisk and about equal and the plantar responses flexor. The facial and ocular signs quickly cleared up and the tremor became of the "intention" type; the abdominal reflexes became normal, but the rigidity of the right side remained. He had now regained the power to walk, but could not yet speak intelligibly. Recovery had been slow but continuous.

Dr. W. G. STONE and Dr. F. NORMAN showed a case of Tumour of the Tongue in a boy, aged five years. The right side of the tongue had been severely bitten three years ago. Since then it was reported that there had always been a swelling under the tongue of about the size of a hazel-nut, with a smooth surface and of the same colour as the rest of the tongue. There was now an irregular purple swelling on the under surface of the right half of the tongue with hardened edges.—Mr. BARKER suggested that the case was possibly one of the mixed type of lymphatic nævus.

## HARVEIAN SOCIETY OF LONDON.

*Ulcerative Colitis.—Functional Nervous Disorders in Childhood.*

A MEETING of this society was held on April 18th, Dr. SIDNEY P. PHILLIPS, the President, being in the chair.

Mr. FRANCIS JAFFREY read a paper on a case of Ulcerative Colitis, Appendicostomy, Cæcostomy, with complete recovery, under the care of Dr. A. C. Latham and himself. A man, aged 48 years, was admitted into St. George's Hospital in March, 1906, with severe ulcerative colitis of six weeks' duration; the bowels had acted as often as 16 times in the 24 hours and there had been severe hæmorrhages. Various drugs were given by the mouth without effect and rectal injections of boric acid, silver nitrate, and starch and opium failed to control the symptoms. As the patient was in a precarious condition Dr. Latham asked Mr. Jaffrey to operate. Appendicostomy was therefore performed, but owing to the small size of the appendix satisfactory irrigation was impossible. Five weeks after the first operation, therefore, cæcostomy was performed and then the colon was daily irrigated with listerine, one ounce to the pint, and occasionally with adrenalin, one drachm to the pint, or liquor hamamelidis, two drachms to the pint. In less than a fortnight practically all the symptoms had disappeared, there being no blood, pus, or mucus in the stools. The cæcostomy was ultimately closed and the patient was now in normal health and at work. The case showed the beneficial result of prompt resort to cæcostomy when medicinal treatment had failed, for there was no doubt that the patient must have rapidly succumbed if he had not been operated upon.—Dr. ALEXANDER MORISON spoke of the styptic and antiseptic value of turpentine in cases of ulcerative colitis.—Mr. T. CRISP ENGLISH alluded to the advantages of cæcostomy over appendicostomy.—The PRESIDENT said that only a few cases of ulcerative colitis require operation, amongst other indications being hæmorrhage and obstruction from atony. He referred to the value of mercury by the mouth and of adrenalin injections.—Dr. LATHAM urged that in the really acute cases of ulcerative colitis surgical measures should be advised earlier than was the usual practice, for medicinal treatment usually failed to control the disease.

Dr. LEONARD G. GUTHRIE read a paper on Functional Nervous Disorders in Childhood. He suggested that all depended upon individual instability of the nervous system and not upon the normal physiological instability common to all young subjects. Such instability was manifested in (1) derangement of coördination, shown in nystagmus, head nodding, some cases of strabismus, congenital stridor, enuresis, and stammering; (2) defective control by higher over lower centres, instanced in chorea, the tics, and some cases of recurrent pyrexia; (3) explosiveness of the higher centres, accounting for epilepsy and eclampsia; (4) explosiveness with readily induced exhaustion of psychical, sensory and motor realms characterised hysteria; (5) instability and exhaustibility of all parts of the nervous system explained neurasthenia; and (6) derangement of the sympathetic and vaso-motor system was the cause of many functional ailments such as pseudo-angina, palpitation, tachycardia, Graves's disease, atonic dyspepsia, and enterospasm. The sympathetic system was at the mercy of the mind and most functional disorders were the outcome of the neurotic temperament. The neurotic child was the father of the neurasthenic adult. The various types and characteristics of neurotic children were described. It was held that the neurotic temperament itself was in no sense morbid though likely to become so under injudicious management. Educational over-pressure was attributed chiefly to fact-cramming, strain of defective memory, enforced concentration over uncongenial tasks, fear of failure, and disappointment at want of success. Precocious children were no more liable than dullards to die young.

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

*Exhibition of Instruments.—Eclampsia.—Bier's Hyperæmia in Gynæcology.—Report of the Rotunda Hospital.*

A MEETING of this section was held on April 12th, Sir A. V. MACAN being in the chair.

Mr. JAMES S. ASHE exhibited a Vulsellum Forceps which he had had made in order to get over the tendency of the bullet forceps to slip out of the cervix and to avoid the discomfort attending the holding of it for any considerable period. The chief features of the vulsellum forceps were that the points interlocked instead of meeting outside, while they were flatter on the under surface than the ordinary bullet forceps so as to offer a greater resistance and not pull through the tissues. The handles were so shaped that no matter how they were held they were fairly comfortable. There was no difference as to the cost of production.

Mr. A. J. HORNE exhibited for Dr. DUKE a new Uterine Dilator. Dr. Duke said that anyone who had performed the operation of dilatation must have noticed the contraction of the cervix uteri on the curette taking place during the proceeding. The cervical wall might require scraping and owing to the contraction spoken of this became difficult, if not impossible. The cannulæ shown were designed to be introduced after dilatation according to the amount of room required, the curetting being carried on through the cannula, which was gradually withdrawn, thus effectually preventing the contraction of the cervix on the curette.

Mr. J. SPENCER SHEILL exhibited a Chart showing diagrammatically the dates and occurrences during the last three years in connexion with an eclamptic patient. He had brought the case before the Academy a year ago and he thought that the further history of the case would be of interest. About the year 1900 the operation of nephrectomy was performed on the patient for tuberculosis of the left kidney. In 1904 she marrried and became pregnant. The remaining kidney, having the extra strain of pregnancy put upon it, began to fail, and in March, 1905, when about six months pregnant, she consulted Mr. Sheill suffering from eclampsia. Induction of labour was satisfactorily done, but the child was lost. In August of the same year she became pregnant again. The usual treatment was adopted, and as far as the kidney was concerned it was fairly satisfactory.

In December of the same year the kidney again showed signs of failure. In January, 1906, when she was about eight months pregnant, the symptoms became so marked that he determined to induce labour. He delivered her of a living child and about three hours afterwards she had an eclamptic seizure. Although cautioned as to the dangers of a third pregnancy she again became pregnant and in November, 1906, the kidney showed symptoms of rapid failure. After consultation with two other practitioners, it was determined, in December, when she was only three months pregnant, to empty the uterus. It was emptied by him under anæsthesia, and in about three days the amount of urine became normal. In January, 1907, it was thought advisable to prevent any further pregnancy, and after consultation and with the consent of the husband and the patient her Fallopian tubes were resected. The chart raised certain points of interest, such as the postponement of marriage for at least three years after the removal of one kidney, and the question as to the induction of labour in order to save the life of the mother and the child. There was also the point as to the significance of the amount of urea in the urine. If he had been guided by the amount of albumin he would never have done anything with the case, for it never rose beyond 0·15 per cent., whereas the amount of urea excreted fell as low as seven and a half grains per ounce in 14 ounces in 24 hours. There were also the points as to the advisability of inducing abortion and of sterilisation. The kidney was functioning absolutely normally between the pregnancies, and was quite capable of carrying on its work. The urine was examined at very frequent intervals in order to be quite sure on that point.—Mr. E. HASTINGS TWEEDY said that the result had justified Mr. Sheill's treatment, but he had never heard of a woman being deliberately sterilised when no symptoms were present and when there was no suggestion that she would ever become pregnant again.—Dr. H. JELLETT said that he could not agree with Mr. Tweedy as to the particular boldness or rarity of removing the tubes for renal disease. It was on all fours with the very old treatment of osteomalacia. It was not possible to wait until pregnancy occurred in order to resect the tubes.—Dr. T. P. C. KIRKPATRICK instanced a case of a girl aged 20 years who became pregnant last year and had eclampsia at the time. She died with all the symptoms of failure of the kidneys. At the necropsy it was found that she had old and chronic tuberculous disease of one kidney which had completely destroyed its function; the other kidney was amyloid. She recovered from the eclampsia but died some months afterwards from failure of the single kidney.—Mr. HORNE said that considering the age of his patient (28 years) and her apparent fertility, he thought that Mr. Sheill was perfectly justified in his action. If he had allowed her to become pregnant again he would probably have had to repeat the former operation with less favourable results.

Mr. SHEILL read a paper on Bier's Treatment of Disease (by hyperæmia artificially produced) as applied locally in gynæcology, and some actual experiences with it in a variety of gynæcological ailments were related. Mr. Sheill dismissed the "arterial" hyperæmia produced by hot air and the "venous" hyperæmia produced by "constriction" because he had had no experience of the former and the latter he considered inapplicable to gynæcology. The "suction" form, creating mixed arterial and venous hyperæmia, was the kind he used, and he showed a simple form of apparatus which had been successfully employed in a number of cases. He said that in order to be beneficial the "suction" must be intermittent and must not be so strong as to cause pain. Three-minute applications and one minute intervals for half-hour sittings daily or weekly, as the case might be, were recommended. He also spoke of the value of the intermittent action, "massaging" the uterus being valuable in cases of adhesions and relaxed pelvic ligaments. Mr. Sheill had used the treatment in two cases of amenorrhœa occurring without obvious cause; the results were negative in so far as the menses were concerned, although in one case other pelvic symptoms were relieved. A case of endometritis was very favourably influenced. In two cases of old pelvic exudate and adhesions the result was especially gratifying. Mr. Sheill suggested that the suction treatment would be valuable to prevent the upward spread of the infection in cases of gonorrhœa, as well as for the safe and easy removal of tenacious mucus from the cervix of nulliparæ desirous of becoming pregnant.

Mr. HASTINGS TWEEDY read the report of the Rotunda Hospital for the year 1905–06.

On the proposal of Dr. THOMAS NEILL, seconded by Mr. HORNE, discussion on the paper was postponed till the next meeting of the section.

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### SECTION OF STATE MEDICINE.

*The State and Syphilis.*

A meeting of this section was held on April 19th, Dr. F. C. MARTLEY, the President, being in the chair.

Mr. G. R. SEYMOUR SURTICH read a paper entitled "The State and Syphilis," discussing the matter from its financial, vital, hygienic, and legislative aspects. He endeavoured to show that the time had now come for an active crusade to be formulated by the Government and the people against syphilis. He adduced figures to prove that the cost to the nation of venereal diseases in the army, navy, and Government departments amounted annually to no less a sum than £3,000,000, and that allowances for superannuations and for sick leave occasioned indirectly through these diseases, though not appearing in the returns as such, were a further cause of heavy expenditure. In estimating the loss to the nation from death and disablement not only syphilis should be considered but also all those diseases which may be traceable to it. The hygiene of syphilis might be dealt with from the basis of a "trihedron" supporting the principle of morality, sociality, and legislation. Circumcision he believed worthy of being adopted universally. Boys should be encouraged to acknowledge any slip to their fathers. Lectures should be given in schools and ambulance classes on the dangers of venereal disease. He believed that the Contagious Diseases Acts fulfilled their purpose; they ought, however, to be applied not piecemeal to secluded areas but generally throughout the empire. He recommended free dispensaries for men in each quarter of a city, the notification of the disease, and the punishment of those to whom its spread was traced, together with the compulsory detention and segregation of prostitutes whilst in an infectious condition.

Colonel EDWARD BUTT, R.A.M.C., said that his experience of the disease had been limited to the army, but he thought that the medical profession, in common with the general public, did not recognise that, notwithstanding all sorts of moral and educational influences, things were much the same as they had been in the past. His experience, gained during his last three years in India, had led him to the conviction that the disease could be stamped out. During that period, in a garrison of 1000 men, he had not one case of syphilis, although there were many prostitutes living on the confines of the garrison, and none of these contracted syphilis. The accomplishment of this was made easy for him by the magistrates, officers commanding, and his brother medical officers working with the one desire of stamping out the disease. They induced the soldiers to believe that they could benefit them by submitting to treatment. There was no stigma attached to women who suffered from venereal diseases going into the cantonment general hospitals, and the native women attendants were taught to explain to the women the benefits of treatment. The result was, he thought, strong presumptive evidence in support of his contention that so long as local manifestations of the disease had been removed and the treatment was continued the disease could not be communicated.

Dr. HENRY FITZGIBBON said that the difficulty which had always existed in dealing with patients in the Lock Hospital had been the absence of controlling power to get them to remain under treatment. Power was required to keep prostitutes in hospital as long as there was active syphilis present, and to keep them under observation and treatment as extern patients afterwards. There was also a difficulty in connexion with young men who had not the means to pay for treatment and who had no encouragement to go to general hospitals.

Major BROWN, R.A.M.C., said that the majority of those who indulged in sexual vice were not open to moral persuasion. Women who practised as prostitutes could not be prevailed upon to submit to treatment for a sufficient period and the only practicable way was to compel them to remain in hospital or to report themselves to a medical practitioner until they could be certified as free from the disease. The efforts that had been made to stamp out the disease in the army did not seem to have had much effect. In Dublin,

in 1906 the constantly sick from syphilis were 2·93 per 1000, while in 1866 the proportion was 1·72 per 1000.

Dr. T. P. C. KIRKPATRICK said that the question of State interference was as old as history. So far back as the year 1162 Parliament interfered for the regulation of brothels. It was a mistake to suppose that there was no regulation for State interference with venereal disease in Dublin. Under the Act of Parliament 5 Vict., c. 24, the police dealt very severely with prostitutes and soliciting, and in the Act 48 & 49 Vict. there were very stringent regulations for the suppression of brothels. He had received from the Commissioner of Police a table showing the number of women proceeded against during the last five years, 601 being dealt with in 1906. During the same period 20 brothels had been suppressed in each year. Syphilis was not always, as was urged by some persons, a merited disease. The morbidity and mortality of the disease justified them in urging the State to interfere in the matter. The sentiment of the country was against the official registration of prostitutes, and he would rather follow the suggestion that the laws at present in force should be used against solicitation, and a man who could be proved to have infected a woman with syphilis should be liable to similar punishment.

Colonel CHARLES H. BURTCHAELL, R.A.M.C., said that he had been in several American cities where prostitution was rampant, although the police arrangements absolutely prevented soliciting. If the prostitutes did not find the men, the men would find the prostitutes. Syphilis was due to a voluntary act. If legislation was enacted it should be equally severe on the man and the woman, and he thought that there should be some restriction on the marriage of syphilitic persons.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 19th, Dr. J. Lindsay Steven, the President, being in the chair.—Mr. H. Rutherfurd read:—Notes of a case of Cerebellar Abscess following Otitis Media. The symptoms were headache and dizziness and mastoid abscess was diagnosed. Under treatment the symptoms disappeared and the patient was sent to a convalescent home to improve his general condition before operation. On re-admission he had frontal headache and was apathetic and livid. The pulse was from 52 to 62. After the radical mastoid operation the pulse ran up to 116 but fell again. There was no recurrence of duskiness until the sixth day when it came on suddenly with coma. Respiration failed and he died. Miss M. Hannay performed a necropsy and found a cerebellar abscess. There was no suppuration at the base of the brain. Granulation tissue was found around the eighth nerve. 2. A case of Fat Embolism of the Brain after Simple Fracture of the Leg. 3. A case operated on for Otitis Media with Sinus Thrombosis. Dr. H. Wright Thomson read notes on the Condition of Retro-bulbar Neuritis which developed. Sinus thrombosis developed three months after the mastoid operation and the internal jugular vein was ligatured. Vision rapidly failed and the left eye became quite blind. The external appearance was normal. The vision of the right eye was $\frac{6}{36}$. There was central colour scotoma. The optic discs were very white with irregular margins. The laminæ cribrosæ were invisible. A month later vision was $\frac{6}{9}$ and colours were recognised. The papillitis in this case was considered to be secondary to the retro-ocular neuritis. The patient had influenza before operation and the condition was probably of toxic origin.—Dr. J. Stoddart Barr showed: 1. Three cases operated upon for Empyema of the Mastoid Cells in which the resulting cavities were filled with the iodoform wax of Mosetig-Moorhof. In Case 1 six days, in Case 2 nine days, and in Case 3 12 days passed after the mastoid operation before the cavities were filled with the iodoform wax. Healing was complete in 16, 18, and 21 days respectively after the vertical cells had been curetted. In all the cases the otorrhœa had ceased, the post-auricular scar was slight with no depression, and the hearing greatly improved. A contrast case was also shown in which the older method of packing with gauze strips had been adopted and in which healing was not complete until 12 weeks after the operation, leaving a marked depression behind the ear. 2. A patient, aged 49 years, from whose Nose a Foreign Body had been removed which had been there for fully 40 years and had excited severe and constant headache. By posterior rhinoscopy pus in large quantity was seen filling the left choana. The left middle turbinal was removed as sphenoidal or posterior ethmoidal disease was diagnosed. It was only after this had been done that the foreign body, a piece of indiarubber one inch square and covered with pus, was seen lying upon the anterior wall of the sphenoidal sinus. Its removal, which was easy, was followed by complete cessation of the headaches.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 5th, Dr. W. C. Chaffey, the President, being in the chair.—Dr. Walter Broadbent showed a man with Aneurysm of the Third Part of the Arch of the Aorta, having a brassy cough, paralysis of the left vocal cord, tracheal tugging, dulness and pulsation in the left second space, with a harsh systolic murmur and a loud second sound over this area and the aortic region, also diminished air entry in the upper lobe of the left lung. He also showed a case of Basic Phthisis in a young man with a large cavity in the left lower lobe and only very slight signs in the apices.—Mr. H. H. Taylor showed a woman with a Swelling in the Region of the Right Lacrymal Gland of recent origin and a subsequent swelling of the forehead. There was also a node on the right tibia and the diagnosis lay between sarcoma and gumma.—Mr. T. H. Ionides showed a Stone three inches long and three-quarters of an inch in diameter which he had removed from the ureter of a man in whom he had twice crushed stones in the bladder.—Mr. R. F. Jowers showed an Extra-uterine Fœtation of the Tubo-ovarian type which he had removed by operation.—Dr. C. F. Bailey showed an x ray photograph of a Tuberculous Wrist.—Mr. H. H. E. Scatliff read notes of a case of Lymphatic Leukæmia which he had first seen in January for a hæmatoma of the inguinal glands which he had opened, letting out pus and blood. Subcutaneous hæmorrhages then developed with a high septic temperature and the gums became spongy and bled easily; there was also diarrhœa with blood in the motions. The blood was examined and found to contain 64,000 leucocytes, of which 45,000 were lymphocytes. The patient died in March.—Mr. Taylor read some notes on the Royal Commission on Tuberculosis, remarking that it was appointed after Koch's statement that bovine and human tuberculosis were distinct diseases, not transmissible from cow to man or *vice versâ*. The Commission had found that human tuberculosis was infective to cattle, if given in sufficient dose, but it was less virulent than bovine. Two kinds of human bacilli had been differentiated, one more virulent, like bovine, and difficult to grow on media, the other less virulent but easier to grow. In 60 children examined they found the bacilli analogous to bovine 14 times. Of 23 cases of abdominal glands examined 19 contained bovine bacilli. In 20 tuberculous cattle the milk was virulent to guinea-pigs 11 times. It therefore seemed clear that bovine tubercle was transmissible to man as well as human to cattle.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN.—A meeting of this society was held on April 24th, Dr. Leslie Roberts, the President, being in the chair.—Mr. G. W. Dawson showed: 1. A woman, aged 79 years, with Paget's Disease of the Left Breast which he had treated with x rays. The case had been previously exhibited before the society and the members were agreed that considerable improvement had taken place. 2. A boy, aged 14 years, with generalised Keratosis Pilaris associated with a slight degree of Ichthyosis. The palms and the soles were free.—Dr. E. G. Graham Little showed: 1. A case of Tuberculosis of the Ear in a girl aged 13 years. There was a necrotic condition of the margin of the left pinna which had existed, off and on, for seven years. There was no history of any local inoculation, but the child came of a markedly tuberculous stock. 2. A man, aged 40 years, with Ringworm of the Nails. The case was remarkable in that every finger-nail of both hands was attacked by the disease. The mycelium had been identified and the condition had lasted for fully 13 years.—Dr. Alfred Eddowes exhibited: 1. A case of Syphilitic Alopecia in a young woman, of five weeks' duration, associated with much tenderness of the scalp which, together with some local œdema, was the most conspicuous feature of the case. 2. A man, aged 57 years, with a Secondary Syphilitic Eruption of a somewhat unusual type. Upon the abdomen the lesions presented a shiny, lichenoid appearance, while upon the forearms the rash assumed a scaly, psoriasiform aspect. The condition had lasted for four months and before being seen by the exhibitor the patient had been rubbing in an ointment his description of which suggested that it might have contained chrysarobin.

# Reviews and Notices of Books.

*The Diseases of Infancy and Childhood.* By HENRY KOPLIK, M.D. Second edition, revised and enlarged. London: Henry Kimpton. 1906. Pp. 885, with 184 engravings and 33 coloured plates. Price 25*s.* net.

THE second edition of Dr. Henry Koplik's work on the diseases of infancy and childhood does not materially differ from the one that preceded it, a result that is hardly surprising, seeing that the first edition was itself notably up-to-date and very complete in detail. The section on infant-feeding has, however, been recast to the exclusion of certain theoretical considerations which had little bearing on the practical management of infants and with the inclusion of certain new details which can be readily applied and carried out by the practitioner. More attention has been given to the physiology and pathology of the newly born infant than was devoted to these subjects in the first edition or indeed than is usual in text-books of this kind. The section which deals with the specific infectious diseases, and which we particularly commended in a previous review, has received extensive additions, and is in every way worthy of Dr. Koplik's reputation in this department of medicine. In view of the recent epidemic of cerebro-spinal meningitis the chapter which deals with the subject will probably be referred to with some degree of interest, since it represents the latest views of an expert on this question. The author states that in the epidemic form of the disease the diplococcus meningitidis intracellularis of Leichtenstein, Weichselbaum, and Jäger is in the vast majority of the cases the specific cause of the disease, although there is another form of cerebro-spinal type which is caused by the diplococcus pneumoniæ. As to the manner in which the infection is conveyed, a question which is still one of speculation, the author seems to incline to the view that the diplococcus may be disseminated by means of the secretions of the eye and the nose, although he particularly warns his readers against confounding the micrococcus catarrhalis, which is often found in the normal secretions of the nose, with the specific form of the diplococcus intracellularis. But however probable it is that the infection may be carried in this way Dr. Koplik adds that the facts as far as they are known do not definitely establish how the infectious material gains access to the circulation, or whether, indeed, the disease is even conveyed from one person to another. His account of the manifestations of the clinical symptoms, the early diagnosis of the disease, and the bacteriology is well worth reading and could hardly be improved upon even in the light of the great amount of work which has since been done in this disease in consequence of the recent epidemic in this country.

We notice several new illustrations and additional charts in the present edition, and in every way we regard Dr. Koplik's revised volume as a most trustworthy and useful text-book for students and practitioners.

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*Die Neurologie des Auges (The Neurology of the Eye): A Handbook for Neurologists and Ophthalmologists.* By Dr. H. WILBRAND, Ophthalmic Surgeon; and Dr. A. SAENGER, Physician for Nervous Diseases to the St. George's Hospital, Hamburg. Vol. III., Part 2: General Diagnosis and Symptomatology of Visual Defects. Wiesbaden: J. F. Bergmann. 1906. Pp. 623. Price £1 2*s.* 6*d.*

Dr. Wilbrand and Dr. Saenger continue to issue from time to time fresh instalments of their monumental work upon the neurology of the eye. The treatise as originally announced was to be complete in three volumes. Four volumes have already appeared, for Volume III., split into two halves of 474 and 623 pages respectively, consists of two volumes in all but name. Two further volumes are now expected to complete the work but we have no information yet as to how many "halves" they will contain. Criticism of such a gigantic undertaking, if not superfluous, savours of impertinence, and we are disposed to sum up our thoughts in characteristic German fashion by the one word "Kolossal!" To do so, however, would be to shirk responsibility and would be manifestly unfair to the authors. In sober truth our admiration for the extraordinary industry and pertinacity of Dr. Wilbrand and Dr. Saenger is equalled, if not surpassed, by our appreciation of the accuracy and immense value of their treatise. Neurologists and ophthalmologists alike must in bounden duty, if not in spontaneous enthusiasm, acknowledge their profound indebtedness to the authors. Here we find gathered together and conscientiously sifted well-nigh all that is worthy of survival in the literature of the subject. It is true that the English reader will discover important lacunæ; he will fill them better than foreigners, for of course they represent the work of his fellow-countrymen, with which he is quite familiar. So habitual is this feature in German books that it is futile to comment upon it and we are duly grateful to find that the work of Gowers, Head and Campbell and some other English observers receives recognition.

It will have been realised that the treatise is encyclopædic, and, as such, is essentially a work of reference. It is, however, astonishingly readable when taken in small doses, and this is largely due to the fact that the authors' own knowledge of the subject is not only encyclopædic but is illuminated by vast practical experience. They make the dry bones live by their own vivifying influence. We may not always agree with them, though we generally do, but in any case their presentation of the arguments cannot be dismissed with contempt.

The general diagnosis and symptomatology of various forms of amblyopia and amaurosis with which vol. iii., part 2, opens are treated in a particularly masterly and helpful manner. The various combinations of normal and pathological conditions of the central vision, the field of vision, adaptation, the pupil reactions, and the fundus oculi as seen by the ophthalmoscope, in their relation to the underlying disease could scarcely have been better presented. The relationship of the deep and superficial reflexes to visual defects is next discussed, followed by that of disturbances of sensation and of mobility to various forms of amblyopia. The disturbances of speech in their association with amblyopia bring this chapter to a conclusion.

The second and final chapter deals at great length (pp. 643–1044) with every conceivable cause of sudden amaurosis. After reviewing the influence of sex, the site of the lesion, sudden unilateral and simultaneous bilateral amaurosis, the nature of the amaurosis, and its influence upon the mind and character of the individual, the authors discuss the various causes—tumour, cerebral hæmorrhage, embolism and thrombosis, injury, lightning, infection, uræmia, meningitis, loss of blood, intoxication, functional nervous disease, migraine, hysteria, epilepsy, chorea, and blepharospasm. We think that they would have done wisely if they had not devoted so much space to many of these causes—e.g., injury—which cannot be so exhaustively or satisfactorily discussed in a work of this nature as in special monographs.

The book is excellently printed and well illustrated. The fact that the micro-photographs are so much better than is usual in German publications probably accounts for the enthusiasm which the authors evidence towards Dr. Reuter who prepared them. They are adequate but by no means superlatively good. There is a good index, but this might

have been made much more exhaustive with advantage, for the treatise will certainly be used chiefly as a work of reference, and as such we commend it very heartily to all neurologists and ophthalmologists.

## LIBRARY TABLE.

*Sanitary, Maritime, and Quarantine Council of Egypt: Scientific Reports of Members of the Medical Staff.* Edited by MARC ARMAND RUFFER, President of the Council. Alexandria: Société de Publication Egyptienne. 1906. Pp. 206.—The papers in this interesting publication are based on the work done in the laboratories of the Sanitary, Maritime, and Quarantine Council of Egypt. These laboratories were established primarily for diagnosis but members of the staff were encouraged to spend their spare time in bacteriological and pathological investigation and the results of this encouragement have borne good fruit. The opening paper is one on the Diagnosis of Vibrios, by Dr. Milton Crendiropoulo of Alexandria, in which he considers the characteristics of cholera and dysenteric organisms. The author has endeavoured to base a method for the diagnosis of these organisms on their different biological reactions, such as the agglutination, saturation, Pfeiffer's and fixing tests. He describes also the hæmolytic properties of the cholera vibrios. Dr. Felix Gotschlich writes on the Cholera and Cholera-resembling Vibrios met with in the Pilgrims returning from Mecca. Dr. O. Zirolia contributes a short paper on Six Vibrios Isolated from the Water of Ships calling at Port Said. This is followed by an interesting paper by Dr. Armand Ruffer and Dr. Crendiropoulo on the Presence and Formation of Agglutinins in the Blood. In this article are considered the agglutinating properties of cultures freed from bacilli, of the formed constituents of the blood, of non-immunised and immunised animals, and also of their polynuclear leucocytes. Dr. Crendiropoulo and Miss B. Sheldon Amos follow with a paper on the Agglutination of Vibrios, in which they show that chloride of calcium greatly favours this phenomenon, and this result they in a further paper elaborate as regards the true cholera vibrios. Dr. Ruffer writes on hæmolytic and on hæmosozic serum, and on the toxic properties of bile and on antihæmolytic serum. By the same author, in conjunction with Dr. Crendiropoulo, is a note on hæmosozic sera and those substances favouring and inhibiting the action of the hæmolysins of bile and serum; on the lysogenic and hæmosozic properties of urine; on the hæmosozic power of chloride of sodium and its mode of action; and on a hitherto undescribed change in the urine of patients suffering from nephritis. Miss Sheldon Amos writes next on the effect of ligature of one ureter. Next follows the description of a newly devised technique of bacteriology by Dr. Ruffer and Dr. Crendiropoulo, by which the diffusible products of the life of micro-organisms can be obtained without subjecting them or the culture media to the action of heat, filtration, or chemical reagents; then a note on the dialysis of toxins through collodion walls, whilst the final paper deals with the results obtained by disinfection and isolation against cholera. These valuable reports contain much interesting work which reflects great credit on the authors.

*Reports on the Commission appointed by the Admiralty, the War Office, and the Civil Government of Malta for the Investigation of Mediterranean Fever under the Supervision of an Advisory Committee of the Royal Society.* Part V. London: Harrison and Sons. Pp. 86. Price 2*s.* 6*d.*—The first report of this volume is one by Staff Surgeon E. A. Shaw, R.N., on Experiments with Monkeys on Various Possible Paths of Infection in Mediterranean Fever. The results of his researches in this respect show: (1) the possibility of infection through the eyes and nose by means of highly infected dust; (2) the possibility of infection by unlimited contact; (3) the possibility of infection by food contaminated with pure cultures of the micrococcus Melitensis and with dust soiled with urine containing this organism; and lastly, the possibility of infection by the urine of patients through skin scratches, wounds, and abrasions. Staff Surgeon Shaw next contributes a paper on Immunity, Serum, Toxin, and Vaccine Experiments on Monkeys with regard to this fever. He finds that animals which have previously had an attack of Mediterranean fever react much less markedly than others which have not to the same doses of the living specific organism, hence a previous attack confers some protection. With regard to the future successful development of a therapeutic serum the experiments did not give any hopeful indication. It was also found that the toxins of the organisms did not produce the same clinical phenomena as the living micrococcus Melitensis, no fever being developed and the production of agglutinins being less; whilst the author considers that his experiments afford an extremely hopeful outlook with respect to the future of protective inoculation in man against the fever. The same writer also makes some interesting observations on goats, cats, and rats, and ambulatory cases in connexion with Mediterranean fever. No seasonal prevalence of the fever amongst goats similar to that existing amongst man was found to exist in this respect but the number of animals examined here was small. Dr. J. W. H. Eyre writes on the Micrococcus Melitensis and Anti-serum. No protective properties were found nor were any therapeutic results obtained. Major W. H. Horrocks, R.A.M.C., contributes an article on the Mediterranean Fever in Gibraltar, in which he shows that the rapid disappearance of the disease, which commenced in 1885, was intimately connected with the exodus of infected goats from the Rock, the effect of which was far greater than any caused by the part played by improved sanitary conditions, such as the disconnexion of waste pipes and house drains from sewers, and so on. The report concludes with a very complete bibliography of the disease.

*The Control of a Scourge or How Cancer is Curable.* By CHARLES P. CHILDE, B.A., F.R.C.S. Eng., Surgeon to the Royal Portsmouth Hospital. London: Methuen and Co. 1906. Pp. 299. Price 7*s.* 6*d.* net.—This book is not intended for the members of our profession so much as for the public and for those non-medical workers who are able to influence the public by the dissemination of highly important knowledge. Though there is nothing new in the book, Mr. Childe puts forward the most recent ideas in regard to cancer and its treatment very clearly; his plea to the public to go early to the surgeon and not to allow any delay should carry conviction. As Mr. Childe says: "To any who will take the trouble to study this question, to any who will look into the results of former years and compare them with the results to-day, the fact that a revolution has been in progress during the last quarter of a century in the treatment of cancer is clear." The book is an attempt to substitute sound knowledge and hope for ignorance and despair. A quarter of a century ago cancer was considered alike by the medical profession and the public a hopeless complaint; even the signs by which students were taught to recognise it were those of the disease in its advanced and therefore incurable stage. The operations were performed with the view of prolonging life and temporarily alleviating suffering. This, however, is not the general attitude of the profession towards cancer to-day. The objective of the surgeon is to cure. An organised system of education in the early signs of cancer is of the greatest importance. Leaving out of the question the education of the medical student, the author thinks that nurses, midwives, the wives of the clergy, district visitors, and others could be trained in the knowledge of the early signs of cancer. The author impresses

on the public: (1) that cancer is, in its beginning, a local disease and is confined at first to the part which it first attacks; and (2) that from its local site of origin it generally very soon disseminates itself into the system of its victim. In the chapter entitled, "A Glimpse of the Goal," he assures his readers that "cancer itself is not incurable, but that it becomes incurable from the simple fact that its unfortunate victims harbour and nurse their cancers till it is too late. It is not the disease which is incurable, it is the delay that makes it so." Mr. Childe, of course, recognises that science may some day trace cancer to its source and that possibly a cure other than by operation may then be found. But, as he says, it is useless to indulge in speculation, and the cardinal fact is that at present early operation is the only remedy, and it is folly to attempt any other treatment while the disease is still capable of removal.

*Alcohol: the Sanction for its Use.* Translated from the German of Dr. J. STARKE. London: G. P. Putnam's Sons. Pp. 317. Price 6s.—The volume before us is a contribution to the great controversy on the use of alcoholic beverages that will at first sight perhaps be joyfully hailed by that party which the author denominates as "alcoholists"—i.e., those who are accustomed to their use in moderate quantities; but if they inquire further they will find that Dr. Starke's argumentative zeal is scarcely tempered with that logical discretion which is desirable in approaching so debateable a matter. The book is informed with a casuistry of which the following argument forms an excellent example. He premises that in 25 per cent. of cases of arterio-sclerosis there is a history of chronic alcoholism, and then proceeds to argue that because 75 per cent. of cases occur without such a history we are not justified in concluding that the alcohol was the causative factor in any one of the 25, but that "so and so many would have occurred without it and must have been due to some other cause." In another chapter the author insists strongly that the use of caffeine is responsible for much of the increased nervous stress of modern life, but he allows the cup of coffee provided that its injurious effect in dilating the visceral vessels and contracting those of the skin be counteracted by a moderate dose of alcohol. If it be requisite to set such a thief to catch a thief, the regular ingestion of a post-prandial tabella of nitro-glycerine by all tea or coffee drinkers should *a fortiori* receive the author's support. Alcohol is strongly supported as the only article consumed by us that decreases our nervous excitability. The existence of confirmed drunkenness is put down not to the deleterious effects of alcohol but to the special degenerative tendency of the individual and his environment. We are told even that "the moderate drinker has no poisoning of the brain, provided it is only occasionally he gets 'elevated.'" The effects on the heart and liver of those who habitually live too well are laid more at the door of the extra fluid and nourishment consumed in their alcoholic beverages than of the alcohol itself; in fact, they are advised to reduce their diet to compensate for the extra nourishment in their wine and beer. Dr. Starke appeals unconvincingly to everyday experience and common sense in defence of the general use of alcohol, and makes fusel oil and caffeine the scape-goats for its alleged iniquities. Although he ostensibly collects the scientific evidence in the matter the results of Kraepelin's experiments are ignored. In conclusion, we record our conviction that no one is likely to be shaken in his opinion by the perusal of this book, except perhaps a few "alcoholists" to whose sense of logic it has proved too severe a shock! The translation appears to have been carefully done.

*Lectures on Medicine to Nurses.* By HERBERT E. CUFF, M.D. Lond. Fifth edition. London: J. and A. Churchill. Pp. 269. Price 3s. 6d. net. *Nursing, General, Medical, Surgical.* By WILFRED J. HADLEY, M.D. Durh., F.R.C.P. Lond., F.R.C.S. Eng. Second edition. London: J. and A. Churchill. Pp. 370. Price 3s. 6d. net. *Sick Nursing.* By H. DRINKWATER, M.D. Edin. "The Temple Primers" Series. London: Dent and Co. Pp. 138. Price 1s. net.—Of the making of text-books there is no end and the reappearance of two manuals that we have before reviewed reminds us of the increasing choice of books to which nurses can turn for guidance. Dr. Cuff's contention in his preface that the nurse must rely on medical text-books for a brief account of individual diseases hardly now holds good but we will say at once that she could not turn to a more admirable work of its kind than his own. It embodies instruction that is now probably imparted to nurses training at every large hospital and many small ones by their lecturers on medicine, but it would hardly be possible to find a more clearly and succinctly expressed account of the leading symptoms and *rationale* of treatment of the chief medical diseases affecting the various systems. Dr. Cuff's sole object is to assist nurses in the intelligent appreciation of their duties and he repeatedly warns them against the danger of letting a fuller knowledge tempt them to overstep their office. We previously suggested that this little book might prove useful to the student entering on the strange field of clinical medicine and a fresh reading of it warrants us in repeating this suggestion. The chapter on Hysteria will prove especially useful to those unused to dealing with its manifestations. Dr. Hadley's volume has reached a second edition. It deals more shortly with separate diseases but embraces the wider field of surgical and puerperal nursing; the latter subject we consider would be better treated in a separate manual. The book affords a useful and adequate manual of instruction in modern nursing and, although it presents no strikingly new feature, is carefully written and arranged and therefore likely to find a place amongst the standard text-books on the subject. Dr. Drinkwater's book is, we learn, intended for the use of students attending lectures in connexion with the St. John Ambulance Association and evening continuation classes. It certainly contains information which would be profitable to such students but it is devoid of that system which should be adopted in even the most elementary manual—e.g., the chapter on Disinfection includes bronchitis, dropsy, appendicitis, and gout, each treated in a few lines.

*The Kennel Encyclopædia.* Edited by J. SIDNEY TURNER, M.R.C.S. Eng., Chairman of the Committee of the Kennel Club. Part I., Vol. I. Sheffield: The Encyclopædic Press. 1907. Pp. 112. Price 5s.—This is the first part of a serial publication which is to give us encyclopædic information about dogs, and takes us from "abdomen" to "badger"—i.e., it practically comprises the letter A. The contents are of considerable medical interest inasmuch as such subjects as alopecia, anæmia, asthma, amputations, anæsthetics, and antiseptics are dealt with, as well as the ancestry of the dog and its possible use in ambulance work. The articles on Veterinary Medicine by Professor F. Hobday, F.R.C.V.S., and Mr. F. W. Cousens, M.R.C.V.S., are short and exactly what they should be when addressed by a professional man to a lay audience—that is to say, they help the layman to grasp the situation which has to be dealt with, but they do not encourage him to damage the chances of his dog's recovery by inexpert medication. Major E. Hautonville Richardson writes on the Value of Dogs as Ambulance Assistants, and expresses a more favourable opinion upon their possible uses than we should be prepared to do. Mr. R. I. Pocock, F.L.S., superintendent of the gardens of the Zoological Society, contributes a very interesting article upon the canidæ generally, and shows that the rough classification into dogs, wolves, jackals, and foxes, which we find in most popular writings upon the

ancestry of the dog, cannot be brought into accord with scientific classification. The "Kennel Encyclopædia" promises to be a most useful work of reference. It is proposed to complete the work in four volumes of four parts each, but judging from the fact that one whole part has been required for the letter A we should not be surprised to learn that a supplementary volume was required.

## JOURNALS AND MAGAZINES.

*The Bio-Chemical Journal.* Edited by BENJAMIN MOORE, M.A., D.Sc., and EDWARD WHITLEY, M.A. Vol. II., No. 4, April 2nd, 1907. Published by the Bio-Chemical Department, Johnston Laboratories, University of Liverpool. Annual subscription for volume of about 480 pages, 15*s.*—The articles contained in this number are: 1. On the Catalytic Decomposition of Hydrogen Peroxide by the Catalase of Blood, by C. A. Lovatt Evans. Mr. Evans shows that there is an optimum concentration of hydrogen peroxide for each concentration of enzyme. The optima do not vary directly as the enzyme concentrations but more nearly as their square roots. 2. On the Influence of Kreatinin in Modifying certain Reactions of Sugar in Urine, by Hugh Maclean. The author shows that kreatinin is the substance which in normal urine interferes with Fehling's solution by holding the reduced suboxide dissolved and that the inhibitory effect is not due indirectly in the application of that test to the generation of ammonia. The proportion of kreatinin present in urine affects the colour of the precipitate. A yellow precipitate takes place where the cuprous hydrate is finely divided, a red precipitate where it is granular. Kreatinin when boiled with caustic alkali of half the strength in which it is present in Fehling's solution quickly diminishes in amount, part becoming converted into kreatin and part being destroyed. Kreatin resists the action of caustic alkali much longer than kreatinin. 3. On Zymoids, by A. R. Bearn and W. Cramer. The authors show that strong solutions of enzyme heated to about 60° C. for half an hour have a strongly inhibitory effect on the unheated enzyme. The inhibition is destroyed at 100° C. and is not due to an antiferment; it is brought about by a reaction between the substrate and substances present in the enzyme that has been rendered inactive. These substances dialyse only very slowly through parchment. These facts point to the existence of zymoids which are probably pre-formed in the enzyme preparations. 4. The Coagulation of the Blood and the Effects of certain Drugs and Toxins upon it, by C. J. Coleman. 5. The Excretion of Kreatinin in a case of Pseudo-hypertrophic Muscular Dystrophy, by E. I. Spriggs. The quantity of kreatinin discharged is diminished.

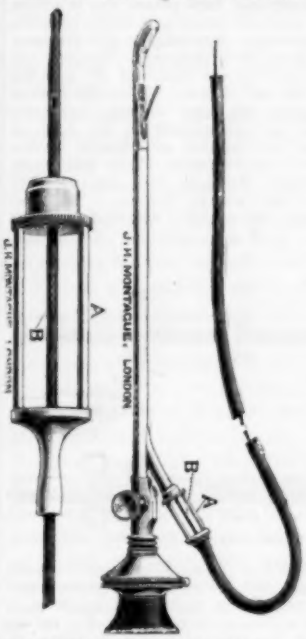
*Man.*—The April number contains photographic portraits of 22 representative members of 16 Bantu South African tribes. These natives were brought together at the Victoria Falls by the Government of Rhodesia in 1905 in order that they might be seen by the members of the British Association for the Advancement of Science, the annual meeting of which was then being held in South Africa.

*Caledonian Medical Journal.*—The April number of this journal opens with a long article on the Laminaria Tent, contributed by Sir William Sinclair, professor of obstetrics and gynæcology in the Victoria University of Manchester. He expresses his "firm conviction that just as the curette was discredited, owing to universal professional ignorance of the conditions essential to safety and fell into disuse for a time, so the laminaria, properly prepared for gynæcological and surgical purposes ..... will be ultimately recognised throughout the civilised world as the unique material." He gives the following directions for making aseptic laminaria tents. "Shape the tent while the tangle is fresh out of the sea, perforating as required. Desiccate completely. Place in solution of perchloride of mercury (a solution of 1 in 2000 is quite strong enough) until the tangle regains its original size by saturation with the solution. Again completely dry the tent. Finish by polishing and introduction of strong linen thread." The tent may remain *in situ* 24 or even 48 hours with advantage. No force should be employed in introducing it and before use it should be softened in hot water or in hot antiseptic solution. In the editorial columns it is announced that the annual meeting of the Caledonian Medical Society will be held in Bradford on July 26th and 27th.

# New Inventions.

## ASEPTIC URETERAL CATHETERISATION SHEATH.

THIS comprises two detachable portions—viz., metal and rubber. The metal one consists of a perforated screw cap and a conical-shaped portion (with broad base and funnelled apex); these are fixed to one another by two thin side rods marked A in the diagram. The screw-cap is a replica of the one on the upper end of the compartment for transmitting the ureteral catheter of the Nitze catheterisation cystoscope. A piece of rubber tubing, 22 inches long and with a bore of one-eighth of an inch, completes the apparatus. The rubber tubing is made to slip over the bulbous bell-mouthed apex of the "cone" and the whole is screwed on to the cystoscope. The ureteral catheter having been introduced into the rubber tubing the catheter is pushed onwards. Owing to the funnel-shaped apex of the metal portion the catheter readily enters the lumen of the "cone," reappears between the two metal connecting rods, and negotiates the orifice leading into the ureteral compartment of the cystoscope. When the *vis a tergo* has introduced the catheter as far as possible grasp it between the thumb and index finger of the right hand and push onwards as required. The advantages of this sheath are obvious. It is simplicity itself. The present real dangers from sepsis owing to the catheter touching the operator's face, hair, and being breathed upon are avoided. It is easily sterilised, for both rubber and metal portions will boil. Excepting for the end remote from the tip there is no need to handle the ureteric catheter until it is well inside the cystoscope. The rubber tubing can lie anywhere, over the cystoscopist's shoulder, in between the patient's legs, &c. *Without* this addition there is a great liability for the catheter to double up at the point of handling when it is being pushed onwards; the opposing thumb and index finger slide up and down the side rods and give the necessary support. It is necessary to use a lubricant for the rubber tubing in order to make the catheter travel more easily; a suitable one is paroleine, made by Messrs. Burroughs, Wellcome, and Co., and as this has now replaced glycerine as a urethral lubricant it is always handy; it may be introduced by a sterilised



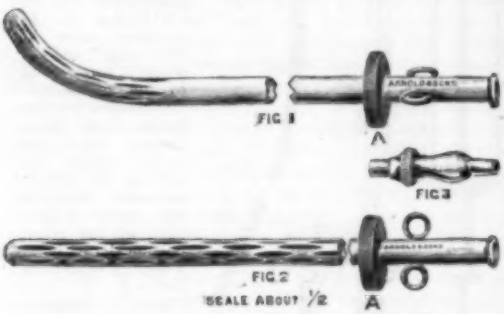
pipette. It is always as well to have a few spare "washers" in the cystoscope box, for when the sheath is being sterilised this washer in the screw cap is apt to boil out and is lost. The cable attachment to the cystoscope should point upwards so as not to be in the way of the "sheath" during manipulation. Gum elastic tubing has been tried in place of the rubber but the latter is more suitable. A spring arrangement for grasping the catheter while it is being pushed onwards in order that the fingers do not come in contact with it at all was too complicated. In lieu of this the hands must, of course, be efficiently sterilised before touching the catheter. The illustration also shows Mr. John Pardoe's most excellent eye-piece fitted on to the cystoscope.

The "sheath" may be obtained from Mr. J. H. Montague, 69, New Bond-street, W.

R. J. WILLAN, M.B., B.S. Durh.,
Senior House Surgeon, St. Peter's Hospital for Stone, London.

## A NEW INSTRUMENT FOR TREATING GLEET.

FOR some six years I have successfully used a method of treating chronic urethritis, chiefly where the follicles are engaged, and I can recommend it to others where ordinary methods fail. This method embraces (1) the emptying of the follicles by aspiration and the passage of large bulbs; and (2) when they are empty and kept patent the injection of certain solutions into them by means of a large injector. Follicular urethritis is common, especially in the prostate, and its treatment is difficult and uncertain. Tersely, the enigma presented is to get the secretion out of, and the injection into, the follicles and utricle. Up to the present time massage, the passage of large sounds, Kollman's dilator, and sometimes the obliteration of the follicles of the penile urethra by caustic or electric action were the aids possessed by surgeons. The first three are often inefficient, while the last two are of only occasional utility and are always difficult. At first I used Erichsen's syringe, to which I attached a small




aspirator. It was too small and the metal between the holes pressed transversely on the ducts. The instruments represented in the accompanying figures are much more effectual; Fig. 1 is for the deep urethra and Fig. 2 is for the anterior urethra; Fig. 3 is a connexion for an aspirator. The perforations are oblong. A and A are indiarubber discs which travel on the instruments and block the meatus. Barred instruments may be used. Having well smeared them with liquid paraffin the particular one selected is introduced, an aspirator or exhausting syringe is applied, and an intra-urethral negative pressure is slowly and gently created. The urethra is then flushed and swept clear of its secretion by a large bulb shaped like a turkey's egg. The injection is then used through these instruments or other large injectors. I wait some time after injecting so as to allow the spasm which grasps the instrument to subside. I am much indebted to Messrs. Arnold and Sons, West Smithfield, London, E.C., for carrying out my suggestions. The instruments are made of silver.

Whilst on the subject of aspiration I may offer to others an aid which has frequently been of good service to me. I refer to drainage of the bladder by means of aspiration, whether this be suprapubic or otherwise. I make use of a resistant indiarubber tube with a tap to connect the catheter to a large bottle, the air of which is occasionally exhausted by a Potain apparatus. The tap is now and then turned so as to aspirate the urine away, thus keeping the bladder empty. I have found this device more effectual than even Cathcart's ingenious plan of syphonage.

Finsbury-pavement, E.C. JAMES MACMUNN.

## THE FIRST FRENCH CONGRESS OF STOMATOLOGY.

THE Société de Stomatologie, wishing to celebrate the twentieth year of its foundation, has decided to organise a Congress of Stomatology in Paris which will be held from August 1st to 5th, 1907. It is stated that this Congress is intended to demonstrate that stomatology is a branch of medicine—a medical and surgical specialty—just as much as is ophthalmology or laryngology, and that it requires from those who practise it a complete knowledge of medicine. The diseases of the mouth, teeth, and jaws, it is urged, are closely related to other diseases and to general pathology, and a correct knowledge of this relation is necessary for all who practise stomatology with all that it includes.

In addition to many papers and demonstrations promised by the leading members of the Société de Stomatologie a number of foreign medical men have promised to take an active part in the proceedings. Several distinguished dentists from America, including Professor Talbot (Chicago), Dr. Latham (Chicago), Dr. Brown (Milwaukee), Dr. Fletcher (Cincinnati), and Dr. Rhein (New York), have already promised to give papers or demonstrations. A museum of all the various models, instruments, pathological specimens, &c., which are of use and interest to the dental surgeon is being formed, and it is hoped that England will also contribute largely to the success of this department. The names of M. Cruet, president, and M. Galippe and M. Redier, honorary presidents, appear on the committee of organisation. M. Chompret, 182, Rue de Rivoli, Paris, is the secretary, from whom all information can be obtained.

Immediately following this congress (August 6th and 7th) the International Stomatological Association, having the same objects, will hold its first meetings and will occupy itself with questions relating to legislation and professional organisation, education, oral hygiene, and international stomatological bibliography. The committee of organisation of this association is formed of one representative from each country and includes several well-known names, such as those of Professor J. Arkövy of Budapest, M. Cruet of Paris, Dr. H. Allaeys of Antwerp, and Professor Eugene Talbot of Chicago. Dr. J. Sim Wallace of London represents England.

Membership of the Congress of Stomatology is open (1) to all members of the Société de Stomatologie de Paris, whether charter or regular members; (2) to all legally qualified medical men practising oral or dental surgery—including, therefore, medical graduates of a French or foreign university or the possessors of the diplomas of the Royal Colleges of Great Britain and Ireland; and (3) to individuals who by reason of their work, knowledge, or attainments may be admitted by the committee of organisation. Meetings will be held in the amphitheatre of the Faculty of Medicine and the proceedings will include four discussions upon stomatological questions; communications on any subject in stomatological science, mechanical dentistry included, may also be presented. Patients, specimens, drawings, casts, and instruments will be shown. The membership subscription is 25 francs. French will be the official language of the congress but Esperanto will be admitted in the discussions; English and German will also be admitted if followed by a French summary of the lecture or discussion.

MEDICAL DEFENCE UNION.—The annual general meeting of the Medical Defence Union will be held at the Midland Hotel, Manchester, on Thursday, May 16th, at 4 P.M., to receive the annual report of the council and the statement of accounts, together with the auditor's certificate for the year 1906; to elect three members of council, Mr. J. Roche Lynch, Dr. A. A. Mackeith, and Dr. F. J. Wethered, honorary treasurer, retiring by ballot under Rule 28, but offering themselves for re-election; to appoint an auditor and to fix his remuneration; and to vote for the payment of railway fares as expenses incurred by provincial members of the council attending council meetings.

# THE LANCET.

*LONDON: SATURDAY, MAY 4, 1907.*


## The University of London and Medical Education.

THE biennial semi-general election to the Senate of the University of London is a somewhat lengthy proceeding. The vacancies which occur every two years by the compulsory retirement of one-half of the senators are filled partly by nominations of the Crown and by professional bodies, such as the Royal Colleges, and partly by elections under a wider franchise. The teachers who are members of their respective Faculties elect a certain number of representatives, and the graduates, as members of Convocation, choose others. The Crown and the London County Council generally lead off by nominating their representatives in February, while Convocation postpones its elections till the last moment, which is in the first week of May. At the present time therefore the greater number of the vacant posts have been filled and it only remains for Convocation to declare its choice at the elections which will take place next week. Most of the Convocation elections will this year be contested, as was also the case with the elections in the Faculty of Medicine. The interest which is being shown in the present semi-general election is a good augury for the ultimate development of the University. It must, however, be admitted that some of the results already declared as well as some recent results in by-elections are not altogether satisfactory. There is an indication of a temporary ascendancy of reaction against the movement for the conversion of the old examining board into a real teaching University. This was perhaps inevitable, but it is none the less disappointing. The relations of the University to medical education in the metropolis is naturally a subject which has the greatest interest for readers of THE LANCET. It appears, indeed, that questions of medical policy are at the moment being canvassed in other faculties besides that of medicine and may indirectly affect the Convocation elections by graduates in non-medical subjects. At any rate, the standard of medical degrees and the concentration of earlier medical studies are two subjects upon which memoranda and circular letters are being actively distributed.

Our views on these two important questions of policy should be well known to our readers. We have from the first consistently advocated those reforms in the constitution of the governing body of the University which culminated in the complete reorganisation of the Senate six years ago. The conviction that a mere examining board could never be a suitable substitute in this great city for a living, teaching university was the motive force which led after years of struggle to this much-needed change. It was well recognised, however, that the transformation of the machinery of administration was not the end in view but was merely the means of enabling those who knew how to do so to carry reform into effect. The extraordinary cumbersomeness of the new machinery was almost enough to appal the stoutest reformer, and recent electioneering methods have shown how well this complicated mechanism facilitates the attacks of those who sigh for the good old days of intricate examinations, ill-educated candidates, and wholesale rejections. To these admirers of the old examining board a high standard of examination and a valuable university degree can only be indicated by the large proportion of candidates whose education is so faultily conducted that they fail to obtain recognition of their abilities. Any attempt to coördinate education and examination is regarded by such persons as a step in a downgrade competition and leads to a cry that the University is lowering the standard of its degrees. THE LANCET has always maintained that bare justice to Londoners who desire to study medicine demands that the University shall so adapt its tests and its teaching to each other that the industrious student of average ability shall be able to obtain a pass degree in his own city and not be compelled to migrate to the provinces for this purpose. For the reconstituted Senate to adopt any policy which does not ultimately lead to this end would be to fail in its obvious duty to London. The proposition that no lessening of the percentage of rejections can be achieved except by sacrificing the value and reputation of the degrees can only be maintained by those who have no knowledge of what constitutes a university. We do not doubt that the Senate fully recognises its duty in this matter and will press on in its good work of coördinating courses of study and their corresponding examinations, confident that by this means only can it satisfactorily lessen the appalling waste of educational energy indicated by a ridiculously high percentage of rejections. In furtherance of this policy of true university progress we cordially support the candidature of Sir THOMAS BARLOW, Mrs. BRYANT, Dr. CHARLES MARTIN, the Rev. VAUGHAN PRYCE, and Professor SYLVANUS THOMPSON at the forthcoming Convocation elections.

On the question of the concentration of the teaching of the earlier medical subjects in two or three institutions under the direct control of the University we see nothing to change our belief that the decision arrived at by the Faculty of Medicine four years ago was a wise one. Too much importance has, perhaps, been attached by some to the rejection by the Faculty of Medicine at the recent election of its two sitting representatives upon the Senate. It is notoriously difficult at elections to limit the controversy to a single issue and it is obviously undesirable to do so in electing the senate of a university. It is impossible to accept the election of two new senators as a clear indication of the views of the Faculty upon a complicated question to which in the past it has accorded the utmost attention and given the clearest expression of its wishes. Before believing that the majority of medical teachers in London are so indifferent to the best interests of medical education as would be indicated by a blind adherence to existing conditions, we should desire to be assured that any modification of policy was arrived at after as full an investigation of the facts as was given to them three or four years ago. We are aware of no change in the serious financial position of medical education in

London, except such as may have been induced by a slight recrudescence of the old mutual jealousies of competing schools which we are confident will ultimately be replaced by a spirit of scientific comradeship in a common university. Meanwhile, competition is an expensive luxury in the pursuit of which the teachers of medicine cannot hope to receive the pecuniary support of the public. It is only by agreeing to a concentration of their efforts that the two-fold advantage of economy and of public support such as has been accorded to medical education in other cities can be obtained by the metropolitan medical schools. The extravagance of maintaining 10 or more separate schools of anatomy and physiology for the number of students engaged upon these subjects in London is too obvious to need serious argument, and two or three facts stand out which make it, we think, impossible to continue the existing arrangements with any prospect of permanent success. No teacher in any of the earlier subjects of medical education in London receives sufficient remuneration to justify him, unless he has private means, in refusing a professorship in almost any other university in the world. The majority of the teachers of the clinical subjects in London either obtain no remuneration at all or the merest pittance, in striking contrast to the perhaps somewhat extravagant payment received by the physicians and surgeons who taught in the medical schools during the last generation. The buildings and laboratory accommodation in the medical schools of the metropolis are for the most part markedly inferior to similar provision on the continent, in America, and even in the provincial universities of our own country. We yield to none in our admiration of the energy and self-sacrifice of the London teachers and of the splendid results which they have obtained in difficult and disheartening circumstances. But these conditions cannot go on and we are confident that the more seriously the position is studied the clearer it must become to the teachers, as well as to the Senate, that "concentration" is imperative if London is to retain its position as a chief centre of medical education. It is unfortunate that Sir THOMAS BARLOW has stated that in view of the recent Faculty election he will withdraw his support from the Senate's concentration scheme. We do not believe that if Sir THOMAS BARLOW fails to secure election the Senate will relinquish its efforts to improve true education in London, notwithstanding that some of his opponent's supporters seem to desire it. Nor can we believe that the defeat of Dr. J. KINGSTON FOWLER and Dr. J. ROSE BRADFORD after six years' loyal and arduous service will in any way lessen the determination of the majority of the Senate to forward the establishment of an Institute of Medical Sciences on the lines so carefully laid down by the Faculty of Medicine.

## Medical Expert Evidence in the United States of America.

RECENT legal procedure in America, in relation as much to medical evidence as to any other subject, may not be expected to furnish this country with any valuable examples to copy. Our New York correspondent tells us that the various strategical moves of the prosecution and defence in the notorious THAW case were supported by expert medical evidence on either side with the result that such testimony has been brought into considerable contempt in the United States. We are not surprised to learn it. But a proposal to change the procedure with regard to medical evidence in contested cases has been made in the State of Maine, which is of genuine interest to all who have experience in Great Britain of the undesirable conflicts of expert testimony which arise in many trials in courts of law. These conflicts are not in the least confined to medical topics, but for some reason or other the public considers that a difference of medical opinion in the witness-box is a clear proof of ignorance or venality, while engineers, chemists, and lawyers may contradict each other over and over again and remain honest if opinionated citizens. The suggested innovation in the State of Maine appears to have been formulated originally by Mr. L. A. EMERY, now Chief Justice of the Supreme Court of Maine, before the State Bar Association of his province, his recommendations having since been embodied in a Bill. The judiciary committee of the State legislature reported adversely to this Bill, but the Medico-Legal Society of New York has interested itself in the matter and is endeavouring to bring its principles before the legislatures of other States after securing authoritative opinions in their favour. The following points constitute a summary of what is objected to in the present situation in American courts: (1) the partisanship of paid medical experts; (2) the payment of large sums of money to medical expert witnesses for services supposed to be rendered by them; (3) the growth of the practice of having expert witnesses present who listen to the evidence of other medical men and are then asked for their opinions upon the evidence thus given; and (4) hypothetical questions put to expert witnesses. These points will readily be understood by medical men who have followed trials in this country in which contradictory medical evidence has been given, although possibly the undesirable features of the system may be more accentuated in the courts of the United States. Barristers also who are sometimes led into making uncomplimentary comments upon the testimony given by "experts" should agree that the partisanship observable is, as a rule, perfectly honest and unconscious, arising out of the manner in which scientific questions are contested in the law courts under a system for which the lawyers and not the expert witnesses are responsible.

The remedy proposed on the other side of the Atlantic consists, as might be anticipated, in giving the court power to appoint independent experts to form opinions, if desired, upon matters in dispute, the first section of the Bill referred to being as follows: "In any case, civil or criminal, in the Supreme Judicial Court or any superior court where it appears that questions may arise therein upon which expert or opinion evidence would be admissible, the court or any justice thereof in vacation may appoint as examiner one or more disinterested persons qualified as experts upon the questions. The examiner at the request of either party or of the court or justice appointing him shall make such examination and study of the subject matter of the questions as he deems necessary for a full understanding thereof, and such further reasonable pertinent examination as either party shall request. Reasonable notice shall be given each party

of physical examination of persons, things, and places, and each party may be represented at such examinations." The remaining sections provide further details of the procedure to be followed, including power given to the court, or to either side, to call the examiner appointed by the court into the witness-box. There is no restriction laid upon the parties calling their own witnesses if they desire to do so, but it is anticipated by those in favour of the proposed measure that the practice of calling witnesses avowedly favourable to the parties tendering them will die out, on account of the disadvantage at which these would be in relation to the independent and official witness. The suggestion of such independent expert witnesses being called in medico-legal cases has been made often in this country and has received the support of important men in both the legal and medical professions. It is to be hoped, therefore, that certain of the American States may be found to give a trial to the innovation proposed. We are ourselves experimenting in a similar direction in the enlarged powers given to medical referees by our latest Workmen's Compensation Act, and it seems possible that very useful results may be obtained by combining experience gathered in two countries, each of which is aware that its previously existing system is far from perfect.

## The Accommodation of Hop- and Fruit-pickers.[1]

IN a recent report to the medical department of the Local Government Board Dr. REGINALD FARRAR, one of the medical inspectors to the Board, records the result of an extensive inquiry into the lodging and accommodation of hop-pickers and pickers of fruit and vegetables in different parts of England. He has visited many hop-gardens and farms where strawberry-pickers and pea-pickers are employed, and his report gives a variety of useful information obtained by personal investigation and by discussion with growers, pickers, local sanitary and police officers, missionaries, and others. As a result of these inquiries he is able to indicate practical lines on which rural sanitary authorities should proceed in order to deal with the important questions of sanitary administration which arise from the enormous migration of hop-pickers and fruit-pickers which takes place during the picking season. The powers required by local authorities to secure the decent lodging accommodation of hop-pickers and others are to a large extent supplied by the adoption of by-laws such as those formulated by the Local Government Board in its model clauses of 1902. These model by-laws, together with certain alterations and amendments which have since been officially approved, are reproduced in the report. By-laws of this kind appear to have been adopted in the majority of districts concerned, although there are notable exceptions, such as the rural district of Faversham, into which about 9000 "hoppers" migrate during each season.

Dr. FARRAR'S report will strengthen the hands of local authorities in making active use of these by-laws. He shows that many hop-growers have not only provided accommodation which complies with by-law requirements, but in addition have taken trouble to afford their workers rough-and-ready conveniences of different kinds. Plans and illustrations are given of huts, shelters, cooking arrangements, and the like which have been provided at comparatively low cost, and which represent a distinct advance on the conditions which formerly obtained. The growers who have supplied lodging accommodation of a satisfactory kind are usually individuals or companies in a large way of business who can regard such provision as part of their capital outlay. The smaller grower would in some cases find it difficult to follow their example. Dr. FARRAR points out, however, that the hop industry under modern conditions has become profitable only to the grower on a large scale who can afford to practise "intensive" cultivation and scientific methods of drying and is in a position to hold over crops from one year to another. The smaller farmer without capital has now to a large extent been squeezed out of the industry. Hop-pickers may be classified as "home pickers," "foreign pickers"—i.e., persons imported into the district from large towns—gipsies, and casual vagrants. Employment of the habitual vagrant is not encouraged by most growers. A few hop-growers, however, appear to depend almost exclusively on tramps for picking, while the vagrant supplies a large part of the labour required during the pea-picking season in Worcestershire. Where "professional" vagrants are aggregated in a district they are invariably a source of great annoyance, nuisance, and even serious danger to the inhabitants. In Upton-on-Severn during the pea-picking harvest it is reckoned that the expense entailed by police precautions and extra casual ward accommodation almost counterbalances the profits of the pea-picking industry to the district. Dr. FARRAR points out that the gipsy class of pickers, nomads dwelling in their own vans and tents, contrast favourably in most respects with the habitual vagrants. They are good pickers and in general fairly orderly, though sometimes quarrelsome. Their presence is occasionally objected to by farmers on account of their pilfering tendencies, but from a sanitary standpoint does not, as a rule, afford ground for serious complaint.

As regards the most important class of pickers, the "foreigners" or casual hands from the large towns, Dr. FARRAR, as already indicated, is able to point to a general tendency to improvement in their conditions of lodging, especially in certain hop-gardens. He gives illustrations, however, of insufficient or filthy accommodation for sleeping, absence of water or facilities for cooking, and other objectionable conditions for which neither the short period of employment nor the class of people employed should be accepted as an excuse. Attention is also drawn to the way in which married couples, single men, and girls are often herded together indiscriminately under the same roof or in the same tent, and to the gross overcrowding which is liable to take place in tents and huts, especially on Saturdays and Sundays, when the hoppers have week-end visits from friends in town. There would often be great advantage in the provision of camp latrines. The amount of supervision exercised by officers of the sanitary authorities concerned varies greatly; in several districts excellent work

[1] On the Lodging and Accommodation of Hop-pickers and Pickers of Fruit and Vegetables, by Dr. Reginald Farrar. London: Wyman and Sons, Fetter-lane; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. No. 252. Price 1s.

is done by certain inspectors of nuisances, but in others the inspector does not regard this supervision as part of his duty. In one of the most important hop-growing districts Dr. FARRAR found that the local inspector had chosen the hop-picking season as the time for taking his annual leave. Much good may be done by inspectors who keep an eye on the quality of the food, particulary the fish, which is taken to hop-pickers by hawkers and others; knowledge on the part of dealers that unsound food is liable to seizure does much to insure a proper food-supply. The report makes most interesting reading and lets a flood of light in upon a somewhat dark and untrodden path in public health.

# Annotations.

"Ne quid nimis."

## THE PROVISION OF SELF-SUPPORTING SANATORIUMS FOR THE WORKING CLASSES.

ON Tuesday, May 14th, a dinner will be held at the Hotel Cecil in support of the National Association for the Establishment of Sanatoria for Workers suffering from Tuberculosis. H.R.H. the Prince of Wales will take the chair and the long list of stewards contains many influential and distinguished names, which include the majority of the foreign Ambassadors and Ministers in London. The scheme was founded under the ægis of the Hospital Saturday Fund and has for its object the coöperation of friendly societies, trade unions, and other organisations to establish self-maintaining sanatoriums for workers. The board includes representatives of many sick and friendly societies of high standing and intends to make the sanatoriums entirely self-supporting when they have been built by the subscriptions of the charitable. These societies comprise about 3,000,000 workers, irrespectively of their wives and families. One concrete example will well illustrate the scheme. In the first or model sanatorium at Benenden in Kent, of which the first 30 beds were opened on March 4th, provision will be made for 200 beds, and of these the Postal Federation has guaranteed to support 25, over 40,000 of its members having undertaken to subscribe 2*s.* a year for that purpose. Other bodies of workers are making provision to support other beds. A special feature of the scheme is that whilst the bread-winner of the family is receiving treatment in the sanatorium the wife and children will receive the full amount of the sick pay which he would have received under the old *régime*, this being provided for by the self-imposed extra levy on the members of the society. Preference is to be given to early cases for treatment in the sanatoriums and it is proposed to provide such light employment for patients as the medical officers may deem advisable. This scheme constitutes the first serious attempt to emulate the German system of workmen's insurance. It is true that it differs vastly from that measure in not being compulsorily enforced upon the people, but the large number of workers whom it will affect and the soundness of its provision for their benefit bring it within comparison of the great Bismarckian scheme. It entirely obviates the pauperising tendency that many people see in our present system of relief, and if it is to be successful will fill an urgent national want. It is necessary, however, for the committee to appeal to public benevolence to build and to equip the proposed sanatoriums, for the affiliated societies are prevented by their constitutions from making more than ordinary donations towards the acquirement of sites and building. Money could hardly be given with a better assurance of its utility than is afforded by the objects of this National Association, and we wish it both on the occasion of this dinner and afterwards a full measure of success in attaining those ends. The value of the sanatorium system of treating tuberculosis is to some extent on its trial, while expert opinion is also not unanimous as to the best method of constructing the buildings. But no one doubts that sanatoriums are of great benefit to certain sufferers, while those as yet in existence are for the most part placed by their pecuniary demands out of the reach of working men. It goes without saying that the guiding principle of the self-supporting sanatoriums will be the practice of the utmost economy commensurate with efficiency. Anything like unnecessary extravagance must ruin the scheme.

## LEAD AND ARSENIC IN TARTARIC ACID, CITRIC ACID, AND CREAM OF TARTAR.

AN inquiry was instituted some time since by the Local Government Board in regard to the contamination of tartaric acid by lead and arsenic in consequence of representations which had been made to the Board that certain manufacturers and importers refused to give any guarantee of purity in respect to lead and arsenic in the tartaric acid which they sold. The obvious result of this singular attitude might be that tartaric acid containing excessive amounts of these impurities might find its way into the market for the purposes of food or medicine. The matter was clearly one calling for settlement, since, as is well known, deleterious effects are liable to result from the continued ingestion into the human system of comparatively small quantities of lead and arsenic. The Local Government Board subsequently appointed Dr. A. W. J. MacFadden to obtain some information regarding the alleged contamination and in a report just issued he has included also some observations as to a similar contamination of citric acid and cream of tartar. It appears from the tables published in this report that in 15 out of the 30 foreign samples of tartaric acid examined the amount of lead present did not exceed 0·002 per cent.; three samples contained a percentage of lead over 0·002 but below 0·003; in 12 samples the lead exceeded 0·003 per cent., the highest figure being 0·0062 per cent. Notable quantities of arsenic were found in several of the samples of Spanish tartaric acid, but with the exception of a sample from Italy and two Austrian samples the other specimens were reported to be either free or as containing not more than one-hundredth of a grain per pound, the limit fixed by the Royal Commission on Arsenical Poisoning. In regard to cream of tartar the proportion of lead was in no case more than 0·0033 per cent., and in 11 out of the 15 foreign samples examined the amount of lead did not exceed 0·002 per cent. Only one sample of cream of tartar contained arsenic in amount exceeding the limit of one-hundredth of a grain. In the five samples of tartaric acid and cream of tartar of home manufacture the lead in no case exceeded 0·002 per cent., while arsenic was not found in any of them. It is concluded that in view of the uses to which tartaric and citric acids and cream of tartar are put, recognised definitions of objectionable impurities are needed for application by manufacturers, chemists, and analysts and for use by importers and merchants selling these materials for food and drug purposes. The requirements of the 1885 and 1898 editions of the British Pharmacopœia do not, it is claimed, in the case of either tartaric or citric acid serve the purpose of the Pharmacopœia as regards contamination by lead and arsenic. General adoption of definite numerical limits of impurity as regards these metals in tartaric and citric acid would seem to offer a more satisfactory basis for trade guarantees and for analytical practice.

Looking to all the circumstances, Dr. MacFadden thinks that having in view the quantities in which tartaric and citric acids and cream of tartar are consumed in food, drinks, medicines, and so on, it is reasonable to conclude that minute amounts of lead or arsenic below 0·002 per cent. and 0·00014 per cent. respectively would not be sufficient to justify their condemnation. Lead appears to owe its origin to the lead-lined vessels used in the manufacture of tartaric and citric acids, while arsenic is most probably derived from the mineral acids used in the process of their manufacture.

## AN OBJECT-LESSON FROM AMERICA.

WE have before us the first annual report of the "Social Work permitted at the Massachusetts General Hospital," which we have read with pleasure and interest. It contains a most practical attempt to deal with a difficulty the existence of which must have been realised by every physician or surgeon attached to the out-patient department of a hospital. The gist of the work with which the report deals is neatly expressed in the first paragraph. "In most hospitals there occurs many times each year a scene not unlike that described in 'Alice in Wonderland.' '*Have some wine,*' *said the Hatter.* '*I don't see any wine,*' *said Alice.* '*There isn't any,*' *said the Hatter.*' Without any sense of the humour and pathos of the situation we say (in substance) to many patients: 'Take a vacation,' or 'Get a job,' or 'Get a set of teeth.' There is none in sight and no means of getting any. What do we do then? We pass cheerfully on to the next patient." Now it is true that this recurrent difficulty is partly met by the various Samaritan funds and surgical aid societies in connexion with our hospitals, but any one who has known of an unfortunate with one leg amputated painfully dragging himself about month after month to collect the many letters necessary to permit such an organisation to make good his deficiency will testify that our present system is far from perfect. The Massachusetts Hospital has been fortunate in enlisting the sympathies of a large body of voluntary lady workers who have organised a system of social relief work the scope of which, so far as we know, finds no parallel in the hospital life of this country. There are many channels into which their enterprising help has been turned which may be classified as follows: (1) Tuberculosis—the proper distribution of tuberculous patients into "classes" for further treatment; (2) inquiry into the hygienic conditions of patients and their proper instruction therein; (3) the instruction of mothers in infant feeding and preventive work with delicate children *in their own homes;* (4) the provision of vacations, outings, convalescent homes, and change of work for those in need of them; (5) the care of unmarried girls, pregnant, morally exposed, or feeble-minded; (6) the after-care of cases discharged from the wards; (7) work as a distributing agency of deserving cases to proper charitable institutions, insuring the maximum help for them with the minimum delay and trouble; and (8) "almoner" work, i.e., investigation of patients' financial condition. It is noteworthy that none of these schemes include the direct monetary assistance of patients, which is considered to be beyond the scope of the organisation, but all of them necessitate for their success the very diligent personal efforts of the workers. The method adopted is for the general secretary of the work to be present in the out-patients' hall to whom the presiding physician or surgeon may refer any case whose social condition requires investigation or whose requirements fall under one of the above heads. A record is kept giving the medical and "sociological" diagnoses, the disposition of the case and the outcome of it after one, three, and 12 months, and so on. If, for instance, the patient is suffering from tuberculosis steps are taken to get him admitted to a proper sanatorium, or if that be impossible he is attached to one of the "tuberculosis classes" held under medical supervision in different centres of the city where the open-air system of the disease is fully taught to him by voluntary workers who also regularly visit his home to see that their lessons are being properly carried out. This last office is rightly considered one of the most important of the system, not only for the treatment of tuberculosis but of other diseases also; the out-patient physician must only too often feel that his careful instructions in hygiene are but wasted breath when they have merely evoked the plaintive request, "Aren't you going to give me a bottle of medicine, doctor?" The provision of a living and intelligent link between the consulting room and the home is the most striking feature of the system, and given good workers should more than double the value of out-patient treatment. The remaining heads call for less comment, but it is interesting to note a branch of "rescue work" and also a clearing-house system to distribute necessitous cases to other suitable charities. The scheme has evidently been most enthusiastically organised, and although it is only yet on probation during its first year 684 new patients have been dealt with and 857 visits paid to old patients. The work thus auspiciously begun has our best sympathy and we shall follow its development with interest. If any large and practical measure of success appears to follow directly upon it we hope that the Massachusetts General Hospital will communicate the results to the lay press in this country as well as in America. A movement of this sort concerns the public most deeply. Only with the support of the public can it be organised on really inclusive lines, and then (be it remembered) entire devotion on the part of the workers will have to be given to insure success.

## THE CITY OF LONDON AND THE FEEDING OF INFANTS.

IT is a very healthy sign of the times that at last public attention is being directed to the terrible scandal of preventable infant mortality and by consequence to the measures necessary for its reduction. Of these the provision of a pure milk-supply and the proper feeding of infants are incomparably the most necessary; the former is engaging the attention of our legislature and the latter is being brought more prominently before the public by its medical advisers. There is no doubt that a more scientific and widespread knowledge of the principles that underlie the proper rearing of infants is possessed by our profession as a whole than was the case a few decades ago. The ignorant mother or nurse has less licence to wreak her nefarious, if well-meaning, designs upon the infant's stomach—at least, where the family practitioner has a fair opportunity for veto; but, unfortunately, the great majority of babies who are exposed to the deadly perils of the dirty feeding-bottle and unassimilable "food" never pass under medical supervision. To reach the mothers of this class the medical officers of many boroughs have lately issued circulars containing clear and concise directions for the preparation of meals for infants, qualified by an authoritative statement of the superiority of breast-feeding during the first nine months. These gospels of hygiene take the form both of cards for hanging up in public places and pamphlets intended for broadcast distribution; one of the former, prepared by the medical officer of health of the City of London, lies before us and is an admirable example of what such a manifesto should be. Ample instructions both for breast- and bottle-feeding are given, including a much-needed warning against dummy "teats." The only rule with regard to which we would suggest a modification is this, "Always taste the food before giving it to the child," which might lead an ignorant and possibly diseased woman to take a preliminary suck at

the bottle. We should prefer to see, "Taste a spoonful of food from the vessel in which you mix it before giving it to the child." The instructions given for the dilution of milk are in accordance with the proportions that are usually taught in this country. It will be interesting to note whether the recent English translation of Budin's splendid work on the nursling, in which he advocates a dietary of good and well-boiled whole cow's milk, will lead to such an adoption of his method in this country as will justify its appearance in some future manifesto for the instruction of the public of the City of London or elsewhere. The present one includes a few wholesome rules of hygiene for both mother and child.

## BREAKFAST FOODS.

Professor Robert Harcourt has contributed to the *Journal of the Society of Chemical Industry* of March 30th a valuable paper on the chemical composition, digestibility, and cost of several wheaten and oaten products that have been placed on the market under the names, "breakfast cereals" and "breakfast foods." According to the claims made for some of these foods they are not only perfect foods in a condensed form but they are also brain tonics and possess a variety of wonderful virtues. Professor Harcourt ruthlessly looks below the surface of mere newspaper "puffs" and shows by a series of analyses how little these extravagant claims find justification in fact. The various breakfast foods may be roughly divided into four classes: 1. The old forms of uncooked granulated oatmeal and the wheat farinas. Foods of this class are served after cooking either for a short time or for several hours. 2. Partially cooked rolled and flaked grains. In manufacturing these foods the grain is softened by steaming and then rolled and dried. In this way the food is slightly cooked and may be subsequently prepared for the table in a very short time. 3. Cooked foods—e.g., shredded wheat, which may be served at once without further cooking. 4. Malted foods—e.g., Force and Grape Nuts, which are supposed to be both cooked and partially digested. Professor Harcourt examined the following breakfast foods: Granulated and rolled oats, Quaker Oats, wheat farina, wheat germ, and rolled wheat, flaked barley, cornmeal, Orange Meat, Force, Norka, Malta Vita, Grape Nuts, Canada Flakes, shredded wheat, and rice flakes. Of these, the oatmeals and Norka, an oaten product, contain the most proteins and fat, while all the other foods are richer in carbohydrates. From a consideration of the data set forth in the paper and of the number of heat calories these foods produce when burned, the conclusion is drawn that the oaten products have the highest nutritive value. The much advertised prepared breakfast foods have only a very slight advantage over the ordinary wheaten farinas. Experiments were made to determine the digestibility of these different foods by ascertaining the quantity of protein, fat, and carbohydrates in the food eaten and in the fæces, the differences being regarded as the amount digested. Healthy young men were taken as subjects and each experiment extended over a period of four days. According to these results the wheat germ is more fully digested and absorbed than any of the other foods. The protein of all the foods examined is less completely assimilated than the other constituents. This is particularly true in the case of Force. It is also worthy of note that the carbohydrates of Orange Meat, Force, and Norka are not so fully assimilated as those of the other foods. The results, as a whole, indicate that the expensive prepared breakfast foods are not more completely digested and assimilated than the wheaten farinas and rolled oats or even than the old forms of granulated oatmeal. Calculations were then made as to the food value of the digestible matter obtained from a given money value of each of the foods examined. It was found that cornmeal is the most economical of these foods, the oatmeals take second place, and the wheat germ occupies the third place. Oatmeal and wheaten farina in packages are twice as expensive as in bulk. The pre-digested foods are very much more expensive; thus, Force costs more than four times as much as granulated oats. Experiments were made to determine the influence of cooking on the solubility of these various foods. Rolled oats and wheaten farina were cooked for different lengths of time, when it was found that the wheatmeals are more readily rendered soluble by heat than the oatmeals. Thus, after 20 minutes' boiling the aqueous extract of wheaten farinas contained 27·4 per cent. of soluble matter, while the extract of the oatmeals contained only 14·95 per cent. Rolled oats and wheaten farina were then boiled for different lengths of time, from 20 minutes to eight hours, and the products were eaten by different subjects in order to determine the digestibility of the foods so treated. The results showed that the length of time during which the food is cooked does not very materially influence the percentage amount assimilated. It is possible that less energy may have been expended in digesting the foods that were cooked for the longer times, but no figures could be procured on this point. From all the data presented it is evident that cornmeal, rolled oats, and the farinas, especially if bought in bulk, are the most economical breakfast foods. It is, however, true that these foods do not agree with everyone and that the pre-digested foods may be useful for those people who have difficulty in digesting starch. But the intelligent housewife who needs to consider economy will do well to continue to use the old forms of breakfast foods, except in individual cases in which difficulty is found in digesting them.

## METROPOLITAN FEMALE SANITARY INSPECTORS.

A RECENT return shows that of 28 metropolitan borough councils 22 now employ women sanitary inspectors or health visitors. Those which are not yet included in this list are Stoke Newington (which is a residential district), Bermondsey, Deptford, Greenwich, Shoreditch, and Stepney. The last two names are somewhr surprising as they form a considerable area of "the workshop of London." The Stepney borough council has just declined to appoint a lady sanitary inspector, as it had been petitioned to do by the Stepney Visitors' Association. Islington and Southwark have had such officers on their staffs for more than ten years and in many cases the strength of this element has been increased, in several cases more than once, so that 14 borough councils now employ more than one woman in this work. Battersea and Hammersmith have a health visitor only, the whole of whose salary they find; in the case of sanitary inspectors the London County Council bears half the expense. The salary of these officers varies from £100 to £185 per annum. The chief duties allotted to the office are the inspection of workshops where female labour is wholly or partially employed, the inspection of the homes of out-workers, especially relative to inquiries as to notifiable and non-notifiable infectious diseases, the inspection of small laundries where mechanical power is not used, the inspection of rooms alleged to be verminous, of the kitchens of eating-houses and restaurants, and also of underground public sanitary conveniences. Most of these women have also more or less defined duties appertaining to health visiting, notably with reference to the reduction of infant mortality, to the instruction of mothers of families in health principles, and to the inspection of homes in which non-notifiable diseases have occurred. It was reported that in Stepney there are 191 workshops where female labour only is employed, 1732 workshops where men and women work,

and 3240 places where home-work was performed during the year 1906. In addition to the above official staff there are several voluntary associations which assist in health visiting, working more or less under the supervision of the local medical officer of health.

## OPERATIVE TREATMENT OF CONSTIPATION.

ELEVEN patients illustrating the results of the operative treatment of chronic constipation were shown on April 28th at Guy's Hospital. The occasion attracted many medical men. The patients were closely questioned and carefully examined, especial interest being shown in regard to the diet taken by them which in all cases was found to be the ordinary daily food of the class of life of the patient. Mr. W. Arbuthnot Lane's reasons for short-circuiting the intestine and removing the cæcum and large bowel in these 11 cases, consisting of ten women and one man, were the sufferings of the patients from continued loss of flesh and pain resulting in total inability to work, partly due to intestinal stasis and partly due to toxic influences. In some instances the operation had been performed three years ago and in all marked improvement in health and strength was strikingly exhibited, the condition of rapidly progressive degeneration being replaced by one of physical capacity and the general appearances of health.

## LOATHSOME BED STUFFING.

WE make no apology for returning to this subject, as in our opinion the attitude of the Government in regard to it is very unsatisfactory, while a distinct menace to the public health is being allowed to exist with no organised attempt whatever to suppress the evil. We have received from many quarters complete endorsement of the remarks which we have made from time to time and we have abundant reason for believing that the information supplied to us is absolutely correct. The latest communication is convincing and contains singularly unwholesome facts. "The awful filth that finds its way into beds and mattresses is," says our correspondent, "appalling; rags of the most filthy kind and old carpets stinking with dirt are torn up by a machine known as 'the devil.'" After the heavy grit is shaken out the so-called wool is sent to the bedding manufacturer to be put into beds and mattresses and in many instances these are labelled and sold as "sanitary bedding." There cannot, of course, be the least objection to the use of such material for this purpose provided that it is thoroughly washed and sterilised. We understand, however, that this desirable process would add to the cost by about 2*s.* for each bed and rather than pay this extra amount for a sanitary and clean mattress a stupid section of the public would sooner run the risk of having an offensive bed to lie upon if not one which may very possibly reward their pigheadedness with disease. And manufacturers sell these mattresses realising full well the penalties which the buyer is likely to incur and yet they are powerless to stop it because if they insisted upon an extra charge of 2*s.* for a cleaned mattress their business and custom would be threatened with extinction. "20 years ago," writes our correspondent, "I made no flock but what was washed and sterilised, but to-day, I am sorry to admit, I am compelled to do as others do and make the filthy stuff to compete and hold my own, for there are many manufacturers who have no washing plant, and probably 80 per cent. of all beds and mattresses are made from the rags torn up and used as filling in their dirty state." This evil trade does not only apply to bedding, for there are reasons for believing that what is the most magnificent upholstery on the surface in the shape of velvets, sateen, and tapestry may, after all, be sheltering a loathsome stuffing. The public, or that section of it which cares for these things, would do well to regard this matter seriously, and it is easy enough to ascertain by a simple test whether the character of this material is objectionable or not. If a portion of the material be taken out of the case and placed in a basin containing some boiling water and stirred up there will be an unmistakeably offensive smell evolved if the material is unscoured and unfit for bedding, while the water will become dirty-coloured. Often, however, the stuffing is so palpably bad that such a test is quite superfluous. Surely some system of control should be established by the Government without any delay which will put an effectual end to this infamous disregard for cleanly dealing and common hygienic demand.

## THE FOURTEENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

AT this Congress, which is to be held in Berlin from Sept. 23rd to 29th, the exhibition will be a prominent feature. Scientific institutes, as well as State and municipal authorities, together with private firms, are taking an active part in the preparations for it, and it is hoped that the exhibition will afford a general view of the present state of hygiene from both a theoretical and practical standpoint. The methods of combating infectious diseases (especially colonial and tropical diseases), State and municipal hygiene (especially the care of infants), the providing of good drinking water, the removal of waste, and the hygiene of schools will be represented in an exhaustive and interesting manner. Considering the great importance of hygiene as regards both private and public life it has been resolved to keep open the exhibition, which is to be held in the "Reichstag," after the closing of the Congress up to the end of September. Those interested will have full opportunity to make themselves acquainted with this department of medicine, the progress in which has had a notable effect with regard to the diminution of the general mortality and the considerable advance in the average age limit during the last ten years.

## THE BACTERIOLOGICAL DIAGNOSIS OF TYPHOID AND PARATYPHOID FEVER.

IN a research carried out in the Hygienic Institute in Kiel Dr. R. Müller and Dr. H. Graf[1] were able to find either typhoid or paratyphoid bacilli in the clot of the specimens of blood sent for Widal's reaction in eight out of 11 examinations, a result all the more surprising since it has been generally supposed that the bacilli in the clot and serum of such a specimen are killed by the bactericidal action of the blood serum. To control these observations Dr. O. Kurpjuweit[2] examined all the specimens sent to the bacteriological laboratory in Saarbrücken from Jan. 11th to March 14th, 1906—in all 294. The method adopted was that after the serum had been pipetted off and used for the Widal test the blood clot was spread by means of a glass spatula upon a litmus-lactose agar plate, as used in the v. Drigalski-Conradi method. In a certain number of the cases the blood-stained serum was also spread out upon plates in a similar manner. In 12 cases a positive result was obtained from the blood clot, a growth of typhoid or paratyphoid bacilli appearing, while in the case of the serum the results were uniformly negative. Of the remaining 282 trials, 194 proved to be from cases not typhoid fever. The number of colonies obtained from the small quantity of clot used (from 0·1 to 0·15 cubic centimetre) was usually small, varying between one and 21, but in one case of paratyphoid fever there were about 1600. Dr. Kurpjuweit concludes that although the culture of the clot does not give such generally good results as those of cultures made from the blood itself, the urine, or the fæces,

[1] Münchener Medicinische Wochenschrift, 1906, No. 2.
[2] Arbeiten aus dem Kaiserlichen Gesundheitsamte, Band xxv., Heft 1, 1907.

yet in some cases it may show the presence of bacilli when they are overlooked by the other methods, so that in virtue of its simplicity it is worth while doing in every case where a Widal reaction is tried. He further quotes some observations made since his own were completed by Dr. Fornet,[2] who by means of an improved technique succeeded in growing the organisms 14 times out of 19 examinations of the blood clots in the capillary tubes sent for the Widal reaction. The method which he adopted was to put about five cubic centimetres of fresh ox bile in test-tubes which were then sterilised in a steam oven or by boiling in water. The clot in the Widal tube was placed in one of these tubes after it had cooled and it was closed with cotton-wool in the usual way and put in the incubator for the night. On the next day a large Endo's or v. Drigalski-Conradi plate was inoculated from the bile tube. The effect of the bile is explained by the suggestion that it dissolves the blood and sets free the organism. By this means it is possible to establish the diagnosis of typhoid or para-typhoid fever in the first few days of the disease, at a time when Widal's reaction is likely to be slight or negative and when the bacilli are usually not able to be grown from the fæces. The method is simple of execution and, judged by the reports given of it, seems likely to be a valuable addition to our means of diagnosis.

## UNCINARIASIS IN PORTO RICO.

IN the *Boston Medical and Surgical Journal* of April 4th Dr. B. K. Ashford and Dr. W. W. King have published an important paper on uncinariasis in Porto Rico. The parasite of the disease, the necator Americanus or uncinaria Americana, belongs to the same family as the ankylostoma duodenale and affects man in a similar manner. Uncinariasis in Porto Rico is not only interesting from the medical stand-point but in consequence of its frequency furnishes an all-important social and economic problem. 70 per cent. of the 750,000 inhabitants suffer, in greater or less degree, from the infection and from 5000 to 7000 annually succumb to it. As in ankylostomiasis, anæmia results; the hæmoglobin amounts on an average to from 40 to 45 per cent. The disease has been misunderstood and attributed to various causes, such as malaria, starvation, climatic influences, and so on. The manner in which the worm invades the human body is now definitely known and constitutes one of the marvels of pathology. As has been shown recently by Looss in the case of ankylostoma duodenale, under proper conditions of temperature and moisture larvæ develop from ova in the fæces of the host. They penetrate the bare skin of the feet of the natives, enter the veins, are carried in the circulation to the right heart and pulmonary artery, to be arrested in the small vessels of the lungs. They break through into the alveoli of the lung, ascend the bronchial tubes and trachea, descend the œsophagus to the stomach, and pass into the upper part of the jejunum, their favourite feeding ground. Dr. Ashford and Dr. King have not only experimentally confirmed this mode of infection but are able to state that it is the only way in which the worm enters the body. The theory of inhalation of infected dust does not merit consideration, as drying kills the larvæ. The disease is always acquired from contact of the bare skin with mud or muddy water and is termed by the natives "mazamorra" (ground-itch). From some minutes to half an hour after standing with bare feet in infected places itching begins. In a day the part becomes covered with papules, which later become vesicles. The following experiment was performed by Dr. Ashford and Dr. King. Fæces laden with the ova of uncinariæ were mixed with earth and water in a dish and placed in the shade. On the fourth day larvæ were very plentiful; the majority appeared to be dead, while some moved slowly. The dish was then left slightly tilted over-night and on the fifth day the larvæ which had collected at the lowest level apparently were dead, while those in the damp mud were very active. On the eighth day the hair was clipped from the back of a guinea-pig four days old and a poultice made with the mud, in which the larvæ were still active, was applied for half an hour. Then the spot was cleansed and rubbed with absolute alcohol. Five minutes after application of the mud the animal showed a desire to scratch. The same application was made on the two following days. On the third day of the experiment the animal seemed well and no dermatitis had developed, but it died in the night. At the necropsy one lung was found solid from effusion of blood and the other was filled with dark red spots. One of these spots was excised and examined under the microscope. Ten encapsuled very active larvæ were seen. They seemed to be so strong as to overcome all obstacles, breaking up the lung wherever it obstructed them. The intestines were normal. An important observation made was that in uncinariasis not the slightest trace of blood can, as a rule, be detected in the fæces. The anæmia cannot therefore be explained by hæmorrhage. As Looss has shown for the ankylostoma duodenale, the lesion produced is practically confined to the mucosa of the intestine. The worm draws this into its mouth, denuding it of epithelium which seems to be its food. Albumin and casts, hyaline, finely granular, and fatty, are commonly found in the urine. The prophylaxis is very simple—the wearing of boots. Treatment consists in administration of beta-naphthol. But in consequence of the condition of the kidneys it should be given carefully.

[2] Münchener Medicinische Wochenschrift, 1906, No. 29.

## FESTIVAL DINNER OF THE MIDDLESEX HOSPITAL.

WE have received a letter from the chairman and treasurers of the Middlesex Hospital calling attention to the festival dinner that is to be held under the auspices of H.R.H. the Duke of Connaught at the Prince's Restaurant on May 10th next. It had been intended to hold this gathering during last year but unavoidable circumstances led to its postponement. There is no argument needed in pressing the urgent claims of any large London hospital on the notice of our readers and indirectly through them on that of the larger public whom they may be able to influence. The stability of the Middlesex Hospital finance is no greater than that of other general hospitals, only 15 per cent. of the £40,000 annually necessary for its upkeep being derived from invested property and 35 per cent. from the efforts of a limited number of charitable persons and the various hospital funds. The remaining £20,000 depends on bequests and intermittent charitable contributions from the public. The hospital has a record of 160 years' service to the poor and occupies a central position which, although it borders on a district of great commercial and personal wealth, yet is actually surrounded by a network of poor and densely populated streets; on the larger charity of the former area the latter has undoubtedly a strong claim; the necessity of the hospital in its present site is unassailable as is proved by the 4000 in-patients who yearly receive its benefits. One special feature that strengthens its claim on the sympathies of a very large number of people is the special provision of accommodation made under a bequest in 1792 for the treatment of necessitous patients suffering from cancer "during the remainder of their lives." We need hardly remind our readers that to the cancer wing is attached a research department in the laboratories of which much systematic and useful work has been, and is being,

done to throw light on the dark mysteries of this terrible malady. On all grounds, then, we support the special appeal that is being made on the occasion of this festival dinner; those who wish to express their sympathy with its objects in a practical form are asked to send their subscriptions and donations to Messrs. Coutts and Co., 440, Strand; Messrs. Parr's Bank, 1, Cavendish-square, W.; or to the secretary at the Middlesex Hospital, Mortimer-street, W.

## EPIDEMIC CEREBRO-SPINAL FEVER.

GLASGOW and Belfast still continue to be the chief centres of the epidemic of cerebro-spinal fever. In the former city the weekly report issued on April 26th showed that there were at that time 114 patients under treatment. In Scotland during the week ended April 27th there were 26 deaths from the disease registered in Glasgow, 8 in Edinburgh, 2 in Leith, and 1 in Dundee. In Belfast during the week ended April 25th there were 36 fresh cases notified and 27 deaths, making since the commencement of the epidemic in Belfast a total of 337 cases with 227 deaths.

## GERMAN CONGRESS FOR THE PREVENTION OF VENEREAL DISEASES.

THE Third Congress of the German Society for the Prevention of Venereal Diseases will be held in Mannheim on May 24th and 25th. At 8 P.M. on May 23rd there will be a reception (*Begrüssungsabend*) either in the exhibition or in the Rosengarten. On the 24th, at 8 P.M., the members will dine in the Park Hotel. Applications for dinner tickets (costing 5 marks) should be made as soon as possible either to Dr. Heinrich Loeb, Mannheim P. 7.23, or to the offices of the society, 105A, Potsdamerstrasse, Berlin W. 35. The meetings of the Congress on May 24th and 25th will be held in the Rosengarten from 9.30 A.M. to 12.30 P.M. and from 3 to 5 P.M. The official discussions will deal chiefly with the explanation of sexual questions to children and young persons, and on this subject there will be eight speakers, of whom the first three will be Dr. A. Blaschko, Professor Fr. W. Foerster, and Frau Krukenberg; Herr Köster will discuss literature for the young and Professor Eulenburg and Frau Adams-Lehmann will introduce the subject of "Sexuelle Diätetik." The meetings of the Congress will be public. Anyone may attend and take part in the discussions. Members of the Congress pay a subscription of 10 marks and are entitled to take part in the voting and to receive the Transactions.

## THE PREPARATION OF INFANT'S AND INVALID MILK FROM COW'S MILK.

A SOMEWHAT novel method of preparing from cow's milk a modified milk which approximates to the composition of human milk has recently been proposed by Dr. Szekely, chemist to the Hungarian Government. The process is based on the discovery that carbonic acid gas under pressure separates not only the casein but also part, if not all, of the calcium phosphate of cow's milk. The fresh milk under treatment is first heated to 58–60° C. and then poured into a closed cylinder connected in its turn with a cylinder containing carbonic acid gas. The gas is forced into the cylinder containing the milk until the pressure is from 25 to 30 atmospheres. After a time the separation of the casein is said to be complete, and it separates as a spongy mass, a clear pure whey remaining. With the casein is also a large proportion of the salts and more particularly phosphate of calcium. The whey shows the following average composition: Protein, 0·50 per cent.; milk sugar, 4·50 per cent.; and salts, 0·55 per cent. This accords with the composition of cow's milk the casein of which has been removed by Pukkal's clay filter. An important statement in regard to this whey is that it retains the active enzymes of raw untreated milk. It is further claimed that carbonic acid under pressure destroys tubercle bacilli. Pasteurised cream (65°–70° C.) to which the requisite amount of sugar has been added is then put in with the whey and the infant's milk so obtained is bottled ready for use. To 50 parts of whey 49 parts of pasteurised cream are added containing about 9 per cent. of fat and 1 part of milk sugar. The composition of the milk is stated to be as follows: Fat, 4·50 per cent.; casein, 1·50 per cent.; albumin, 0·50 per cent.; milk sugar, 5·45 per cent.; soluble salts, 0·55 per cent.; and insoluble salts, 0·08 per cent.

THE Department of Public Health of Queensland in a bulletin dated March 23rd states that a case of bubonic plague, No. 27 in the series, the patient being a male, aged 48 years, was reported from the General Hospital, Brisbane, on March 17th. A fatal case of plague reported after death occurred at Townsville on March 17th. The patient was a man, aged 33 years. There are no further developments at Port Douglas. As regards the Mauritius a telegram from the Governor, received at the Colonial Office on April 26th, states that for the week ending April 25th there was 1 case of plague and 1 death from the disease. A telegram from the Acting Governor of Hong-Kong, received at the Colonial Office on April 29th, states that for the week ending April 27th there was 1 case of plague and 1 death from the disease.

THE death is announced of Professor Albert Ritter von Mosetig-Moorhof, extraordinary professor of surgery in the University of Vienna, the eminent Austrian surgeon. The telegrams which have been published, however, show a marked discrepancy as to the details surrounding the sad event. Professor von Mosetig-Moorhof was well known for his introduction of the use of iodoform for packing cavities in bone.

WE are asked to remind candidates for the Radcliffe prize in the University of Oxford that they should send in their memoirs to the Registrar's office on or before June 1st next. No memoir for which any University prize has already been awarded will be admitted to competition for the Radcliffe prize.

Mr. William Wright, M.B., D.Sc., F.R.C.S., will deliver three lectures on the Prehistoric and Early Historic Inhabitants of England in the theatre of the Royal College of Surgeons of England on May 6th, May 8th, and May 10th, at 5 o'clock P.M.

THE death is announced of Dr. Edward Markham Skerritt, senior physician to the Bristol General Hospital. We hope to give particulars of his career in a future issue.

## "SOCIALISM AND THE MEDICAL PROFESSION."

AT a meeting of the Fabian Society held at Essex Hall, Strand, London, on April 26th, Mr. F. Lawson Dodd read a paper on Socialism and the Medical Profession. He commenced by saying that before the democracy would be fit to undertake its widest possibilities education would have to be organised in its service, and with the organisation of education should come the organisation of the medical profession. Both inside and outside that profession there was at present dissatisfaction with the conditions of medical service. The want of system was, however, but a temporary phase in the history of the profession which showed three stages of progress. Having its origin in the mysterious it evolved by various steps to the ecclesiastical period, when medicine was in the hands of the Church in the Middle Ages. This was followed by the

commercial or guild system, when the healing art was practised by smiths and barbers. From this point development had taken place, until there were signs that a third stage, the stage of a State medical service, was approaching. The immense advance of science and the work of Wakley in founding THE LANCET and of Sir John Simon were the prominent factors in the movement towards State interference and control of medical service. The first step was the Act of 1858 which by a system of registration enabled the public to distinguish between qualified and unqualified practitioners, and which created the General Medical Council, the functions of which were to maintain that register and to control medical education. This Act laid down the principle that the medical service of the country exists for the public interest and had called into existence the germ of a State medical service which he hoped in the future would be fully developed. From the medical profession itself, he said, there was a widespread demand for State interference, as was shown by the Bills now before Parliament, one of which aimed at the creation of a State medical examination. Few people realised to what an extent the medical profession was passing into the hands of the State. The Navy and Army Medical Services, the Colonial Service, the Public Health and Poor-law Services, the Prison and Asylum Services were all of comparatively recent origin. Sometimes some of these officers were also in private practice, but this was viewed with a growing distrust which would end in favour of "the whole-time man." These services in many ways compared favourably with other branches of the medical profession and their popularity was shown by the keen competition for certain of the posts. The medical man on entering private practice found himself, after spending many years in study, in a new world where he had to compete for patients; his prestige often depended upon his manners and social position and he was thrown upon the mercy of the public whose diseases he was called upon to treat. Whatever competition might do for trade it had nothing but a bad influence on professional work. In the matter of overwork the medical profession suffered more than any other profession as shown by the high mortality rate among medical men. There was just as good a case for legal interference in regard to overwork in the medical profession as in any other calling. Overwork and excessive night-work might lead to disaster just as it did in the case of the engine-driver or the signalman. Then there was a constant tendency on the part of the public to impose on the medical man and to seek from him gratuitous work. The organised workmen's societies led to the sweating of medical men. All hospital appointments, unless under State control, were practically unpaid, and certificates of various kinds were demanded by the public and by public bodies from the officers without payment. With regard to the question of hospital abuse some hospitals were trying to carry out a system of selection, but if a barrier of appearance was put up the poor clerk was excluded and the workman who was better off was admitted. In his view the suggestion to cut down hospital attendance displayed ignorance of human nature and a total incapacity to realise the grievances of the general public. During the 30 years in which the agitation against hospital abuse had been in progress the evil had been growing. Any solution of the problem to be satisfactory must take into consideration the case of the public as well as of the medical profession. The evils of the individualistic system of medical treatment resulted in most serious hardships to the middle classes, and an organised service of State medicine was, he considered, the only solution of the medical problem. But this ideal could only be brought about by public education. The important thing was to realise the fact that medical service was already in a state of transition, so that changes might now be effected along the line of least resistance. One of the first things that should be done was to secure the fixity of tenure of medical officers of health, who should have adequate assistance. Preventive medicine was taking a more and more important place. The public medical service, which would eventually have to be organised, should have connecting links between the ambulance bearer at one end and the consultant physician or surgeon at the other. It was also necessary that every man should be in some way connected with a hospital throughout his career so that the opportunities for scientific study might be constant. Hospitals would have to be placed on the rates and some form of insurance against sickness instituted. Members of the staff of a general hospital would then be paid just as the medical officers of the hospitals of the Metropolitan Asylums Board are paid at the present time. Another step would be the creation of a Ministry of Public Health. The cost of such a system should fall in part on the exchequer and in part on local taxation. A small tax in time of health would be more welcome, he was certain, to the public than the payment of a heavy doctor's bill at a time when it could be ill afforded.

A discussion followed in which Mr. L. HADEN GUEST, Mr. ADOLPHE SMITH, Mr. GRANVILLE BARKER, and others joined. It was suggested that the cost of such a system would be enormous, and that the condition of the housing of the population was the chief obstacle to the improvement of the public health of the country.

## THE ADULTERATION OF WINES, SPIRITS, AND BEER.

AN interesting conference was held at the Institute of Hygiene, 34, Devonshire-street, London, W., on April 29th, which was largely attended by leading members of the medical profession, analytical chemists, lawyers, importers, distillers, brewers, merchants, and others. The subject chosen for discussion was, "The Adulteration of Wines, Spirits, and Beer, and its Effect on Health."

In opening the proceedings the Chairman, Sir WILLIAM BENNETT, K.C.V.O., said that opinions might differ as to the desirability of the use of alcoholic beverages, nevertheless, if these were used it was essential not only that they should be free from adulteration but that they should also be what they were represented to be. The conversion of the nation at large to total abstinence could, even now, only be regarded, he thought, as a remote contingency, and in the meantime the question of the purity of the various alcoholic beverages in common use amongst a large section of the people must be a matter of grave concern. There was a strong impression abroad that adulteration, substitution, and misrepresentation in connexion with the sale of wines, spirits, beer, and medicated beverages containing alcohol were rife, and if this impression was correct it could not be denied that such a condition of affairs was antagonistic to the welfare of the community and should no longer be tolerated. It also appeared that the means at present available for the prevention of the practices mentioned were virtually useless and in these circumstances the Institute of Hygiene—the primary object of which was the furthering of methods to insure the purity of all articles of consumption—thought it right to convene the present conference in order to obtain the views of those qualified to form a responsible judgment upon the matter, with the object, if after consideration it was thought desirable, of impressing upon the proper authorities the urgent necessity for providing adequate means for the prevention of those abuses which were commonly believed to exist.

Dr. F. J. SMITH proposed:—

That the adulteration, substitution, and misrepresentation of wines, spirits, and beer affects the health and strength of the people, especially in connexion with its tendency to induce a craving for drink, and that the Local Government Board, licensing and other authorities be called upon to take such steps as are necessary to prohibit the sale of liquors which are not what they profess to be and the medical profession be appealed to to exert their influence to prevent their consumption.

He said that the medical profession saw so much of the evil effects of drink that they had the best claim to protest against any misrepresentation in connexion with the drink of the people. He referred to the manifesto that appeared in THE LANCET and said that though he had not signed it he could conscientiously have done so. He also condemned basis wines and so-called medicated wines, as they did much harm by the misplaced confidence which they received.

Dr. W. EWART, in seconding the motion, said that though inclined to limit the use of alcohol as far as possible, yet he gave his whole-hearted support to the motion and hoped it would lead to State action.

Mr. BRAMALL said that as a solicitor he had had much experience of cases dealing with misrepresentation and he fully approved of the motion and referred to the serious burden which now rested on those who had to prosecute.

The motion was carried.

Mr. CHARLES HAIG said that he had had 40 years' experience of whisky and he did not feel disposed to put much value on the opinion of either medical men or

analysts. He thought, however, that medicated wines did much injury, as they were made from the cheapest stuff and sold at enormous profit. He was also in favour of levying a tax on basis wines and wines made in this country and concluded by moving the following proposition:—

That it is in the best interests of importers, producers, and purveyors of wines, spirits, and beer, and to their eventual profit, that every means should be taken to raise the standard of quality and discourage adulteration, substitution, and misrepresentation.

Mr. W. GILES seconded the motion and hoped that the public would be educated to appreciate good quality and to pay for it. He hoped British wines would be made under license.

Mr. W. PHEYSEY thought that the law was sufficient to meet adulteration if it were put in force, yet the production of basis wines required control and the sale of medicated wines was a great evil as they were sold as mixtures and tonics and often prescribed by medical men.

The motion was put to the meeting and carried unanimously.

Mr. S. ARCHIBALD VASEY, F.I.C., F.C.S., moved:—

That it should be required by law that every bottle or vessel containing wines, spirits, or beer, intended for sale and consumption, should bear upon it a clear and accurate description of the contents and a statement of the source of origin.

He did not think adulteration was, on the whole, of a very serious kind—even basis wines could not be called unwholesome and there was no objection to them if they were honestly declared as British productions. He thought beer was never better than it was to-day but though substitution might not poison, it might cheat, and what was wanted was an honest label. He appealed to the Government authorities to deal decisively and without delay with the question of definitions.

Dr. T. DUTTON, in seconding the motion, said that the medical evidence went far to show that there was much merit in good sound wine and beer but substitution and adulteration were to be condemned as most injurious to health.

Mr. L. CAMPBELL JOHNSON thought the motion would be unfair to the British maker as it would not affect foreign producers.

Dr. J. C. THRESH proposed the following amendment:—

That the Local Government Board should appoint a Court of Reference, including commercial and scientific experts, to define standards of wines, spirits, beer, cider, and similar fermented beverages.

This amendment was seconded by Mr. CAMPBELL JOHNSON and supported by Mr. CHAPMAN, F.I.C. It was put to the meeting and carried unanimously.

The motion was then put to the meeting but was not carried, the opinion being generally expressed that it would be very difficult to put into operation.

Mr. BRAMALL moved:—

That two scientific gentlemen, members of this society, be appointed to join the deputation to the President of the Local Government Board to urge upon him to appoint a commission to fix a standard for Scotch and Irish whisky, in order to represent the importance of the matter in the interests of the public health.

This was seconded, put to the meeting, and carried.

Dr. THRESH proposed:—

That the resolutions that have been passed at this Conference be submitted for the consideration of the Prime Minister, the Home Secretary, and the President of the Local Government Board.

This, too, after having been seconded and put to the meeting, was carried unanimously.

The Conference terminated by a cordial vote of thanks to Sir William Bennett for presiding.

## ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on April 25th, Sir R. Douglas Powell, Bart., K.C.V.O., the President, being in the chair.

The following gentlemen having passed the requisite examination were admitted as Members of the College:—Julius Meyer Bernstein, M.B. Lond., L.R.C.P. Lond.; Wilfrid Edgecombe, M.D. Lond., L.R.C.P. Lond.; Daniel Cæsar O'Connell Finigan, M.D. Berlin, L.R.C.P. Lond.; Archibald Montague Henry Gray, M.D. Lond., L.R.C.P. Lond.; Thomas Lewis, M.B. Lond., L.R.C.P. Lond.; Newman Neild, M.B. Vict., L.R.C.P. Lond.; and Clifford Sidney White, M.D. Lond., L.R.C.P. Lond.

Licences to practise physic were granted to 114 gentlemen who had passed the necessary examinations.

The following Members, nominated by the Council, were elected as Fellows of the College:—Daniel Colquhoun, M.D. Lond.; James Barry Ball, M.D. Lond.; Arthur Shadwell, M.D. Oxon.; Arthur Thomas Wilkinson, M.D. Lond.; Edward Mansfield Brockbank, M.D. Vict.; William James Fenton, M.D. Cantab.; George Edward Rennie, M.D. Lond.; Edwin Bramwell, M.B. Edin.; Andrew Duncan, M.D. Lond.; Robert Jones, M.D. Lond.; Thomas McCrae, M.D. Toronto; and Herbert Stanley French, M.D. Oxon.

On the proposition of the PRESIDENT a letter of congratulation was sent from the College to Lord Lister on attaining the eightieth anniversary of his birthday, referring to the immense benefits which had been conferred on mankind through his researches.

The following communications were received:—1. From the secretary of the Royal College of Surgeons of England reporting proceedings of its Council on April 11th. 2. From the Geological Society of London, inviting the College to send a representative to take part in the centenary commemoration of the society's foundation on Sept. 26th to 28th next. The invitation was accepted and it was left to the President to nominate a representative.

A report was received from the Censors' board in the case of Arthur Rayner, L.R.C.P. On Dec. 12th, 1906, he was convicted at the Central Criminal Court of causing the death of a married woman by feloniously procuring abortion and was sentenced to three years' penal servitude. Having investigated the case the President and Censors resolved to report the case to the College, and in view of the serious character of his offence they unanimously recommended that the Licence of Arthur Rayner be revoked and altogether withdrawn and his name expunged from the list of Licentiates. The College adopted the recommendation.

Dr. Frederick Taylor was elected a representative of the College on the Senate of the University of London in place of Dr. W. H. Allchin whose term of office will expire on May 14th and who did not desire re-election.

The quarterly report, dated April 18th, of the College finance committee was received and adopted.

A report, dated March 18th, of the committee of management was received and adopted. The substance of the report was as follows:—

1. The committee recommend that for the future four examiners in anatomy and four examiners in physiology be appointed annually and that each College should appoint two examiners in each subject.

2. In reference to the present regulation requiring candidates to pass in chemistry and physics together, Regulation VIII. will now stand as follows: "A candidate must present himself for examination in Parts I. and II. together (unless he claims exemption from one of them under the conditions of paragraph XII.) until he has reached the required standard to pass in both, or in one of these parts, but he will not be allowed to pass in one part unless he obtains at the same time half the number of marks required to pass in the other part. A candidate may take Parts III. and IV. separately, or he may present himself for the whole examination at one time."

3. In reference to the commencement of the study of anatomy the committee recommended that Clause XIII. be altered as follows: "The study of anatomy and physiology will not be recognised until the candidate has passed in two of the first three parts of the First Examination—viz., chemistry, physics, and biology."

A report, dated April 15th, of the committee of management on the subject of the teaching of midwifery was received and adopted. The committee recommended that the regulations of the Examining Board in England should be altered so as to provide:—

1. That every student shall himself conduct 20 labours. 2. That before conducting such 20 labours he be required: (*a*) to have held the office of medical clinical clerk and of surgical dresser at a recognised hospital during six months each; and (*b*) to have attended a course of practical instruction in midwifery. 3. That the certificate of having conducted the required number of cases be signed by a member of the staff of a lying-in hospital or of the maternity charity of a general hospital, or by the dean of the medical school attached to the general hospital. 4. That every student be required to discharge the duties of clinical clerk in the gynæcological wards or out-patient department of a recognised hospital. 5. That every student be required to complete the curriculum of professional study before presenting himself for examination in midwifery and gynæcology.

A further report, dated April 15th, from the same committee was received and the following portions were adopted:—

1. A report from Dr. Theodore Dyke Acland on the examinations of the Egyptian Medical School, on the professional education at that school, and on the hospital accommodation at Cairo. The thanks of the College were accorded to Dr. Acland for his valuable services as assessor.

2. The Council of the Royal College of Surgeons having adopted the report of this committee, dated March 18th, with the exception of the clause relating to the distribution of the examinerships in anatomy

and physiology between the Royal Colleges, this clause was again taken into consideration by the committee. Under former conditions the Royal College of Surgeons appointed four examiners in anatomy, whilst the Royal College of Physicians appointed two of such examiners and three examiners in physiology were appointed by each College. The committee, on further consideration, felt that the reduction in the number of examiners would be more equitably brought about by each College giving up an examinership in each of the two subjects; the committee therefore proposed that three examiners in anatomy be appointed by the Royal College of Surgeons and one examiner by the Royal College of Physicians, and that each College should appoint two examiners in physiology.

After some formal matters had been transacted the PRESIDENT dissolved the Comitia.

# Looking Back.

FROM

## THE LANCET, *SATURDAY*, May 2nd, 1829.

ON THE PROPHYLACTIC POWERS OF BELLADONNA AGAINST SCARLET FEVER.

BY C. W. HUFELAND.

THE author has been led, both by his own experience and that of a great many other practitioners, to form such a favourable opinion with respect to the powers of this medicine, that he is convinced that in epidemics of scarlet fever it ought universally to be resorted to, as the best means of preventing the disease altogether, or mitigating its violence. The following are his general conclusions:—

1. The proper use of belladonna has, in most cases, prevented infection, even in those instances where, by the continual intercourse with patients labouring under scarlet fever, the predisposition towards it was greatly increased.

2. Numerous observations have shown, that by the general use of belladonna, epidemics of scarlet fever have actually been arrested.

3. In those few instances where the use of belladonna was insufficient to prevent infection, the disease has invariably been slight.

4. There are exceptions to the above three points, but their number is extremely small.

It seems that in some epidemics belladonna has no protective powers at all; the individual disposition, the method of using the remedy, and the quality of it will, of course, have considerable influence on the result of the experiment. Three grains of the extract, which must be recently prepared, are dissolved in three ounces of diluted alcohol; of this solution the individual takes, twice a-day, as many drops as he is years old; its use must be continued as long as contagion is possible. The dose, it appears, is so very small, that even if it should fail in its effect, it will, at all events, not be injurious.

In consequence of Hufeland's communication on the above subject, the Prussian government has issued an official decree, ordering the general use of belladonna, as a prophylactic in all instances when scarlet fever prevails as an epidemic.—*Liter. Ann. der ges. Heilk.*

# VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8663 births and 4910 deaths were registered during the week ending April 27th. The annual rate of mortality, which had been equal to 17·9, 16·9, and 16·8 per 1000 in the three preceding weeks, further declined to 16·0 in the week under notice. During the first four weeks of the current quarter the death-rate in these towns averaged 16·9 per 1000, the rate during the same period in London being only 16·5. The lowest rates in the 76 towns last week were 5·8 in Hornsey, 6·9 in King's Norton, 7·6 in Barrow-in-Furness, and 8·0 in York; the rates in the other towns ranged upwards to 23·0 in Wigan and in Swansea, 23·2 in Stockport, 25·6 in Middlesbrough, and 27·3 in Birkenhead. The 4910 deaths in the 76 towns showed a further decline of 239 from the numbers returned in recent weeks, and included 532 which were referred to the principal epidemic diseases, against 569, 544, and 506 in the three previous weeks; of these, 226 resulted from measles, 167 from whooping-cough, 47 from diphtheria, 36 from diarrhœa, 34 from scarlet fever, and 22 from "fever" (principally enteric), but not one from small-pox. No death from any of these epidemic diseases was registered last week in Southampton, Swansea, Huddersfield, Rochdale, York, or in nine other smaller towns; the annual rates from these diseases, however, ranged upwards in the other towns to 4·4 in Birkenhead, 4·5 in Sheffield, 4·6 in Bolton, and 5·3 in Portsmouth. The fatal cases of measles in the 76 towns, which had been 251, 228, and 216 in the three previous weeks, rose again to 226 last week; the highest annual rates therefrom were 3·0 in West Bromwich, 3·1 in Birkenhead, 3·2 in Nottingham, and 4·0 in Sheffield and in Portsmouth. Whooping-cough also showed increased fatality and was proportionally most fatal in Brighton, Tottenham, Stockton, and Salford. The deaths referred to diphtheria, diarrhœa, and scarlet fever were also more numerous than in the previous week. Scarlet fever was most fatal in Wigan, and diarrhœa in Rhondda and Tynemouth. Of the 22 deaths referred to "fever," three occurred in Wigan, equal to an annual rate of 1·8 per 1000. One case of small-pox was under treatment in the Metropolitan Asylums Hospitals at the end of last week, being the first case admitted to these hospitals since the end of June last. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2637 and 2628 in the two previous weeks, rose again to 2665 at the end of the week under notice; 360 new cases were admitted during the week, against 296 and 361 in the two preceding weeks. The deaths referred to pneumonia and other diseases of the respiratory organs in London, which had been 412, 355, and 326 in the three previous weeks, further declined last week to 295, and were ten below the corrected average number in the corresponding week of the five years 1902–06. The causes of 49, or 1·0 per cent., of the deaths registered during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Newcastle-on-Tyne, Salford, and in 50 other of the 76 towns; the proportion of uncertified deaths, however, again showed considerable excess in Liverpool, Birmingham, St. Helens, Warrington, South Shields, and Gateshead.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 20·2 and 20·0 per 1000 in the two preceding weeks, rose again to 20·6 in the week ending April 27th, and exceeded by 4·6 the mean rate during the same week in the 76 large English towns. The rates in the eight Scotch towns ranged from 17·0 and 17·6 in Aberdeen and Dundee to 24·2 in Glasgow and 22·5 in Leith and Perth. The 714 deaths in the eight towns were 19 above the number in the previous week, and included 121 which were referred to the principal epidemic diseases, against numbers increasing steadily from 100 to 133 in the six preceding weeks. These 121 deaths were equal to an annual rate of 3·5 per 1000, which exceeded by 1·8 the rate from the principal epidemic diseases in the 76 English towns; they included 52 from whooping-cough, 39 from "fever," 12 from diarrhœa, 11 from measles, six from diphtheria, and one from scarlet fever, but not one from small-pox. The 52 fatal cases of whooping-cough were within two of the number in the previous week, and included 43 in Glasgow, and two each in Edinburgh, Aberdeen, Paisley, and Greenock. The 39 deaths referred to "fever" showed a further decline of three from the high numbers in the two previous week, but included 27 in Glasgow, nine in Edinburgh, two in Leith, and one in Dundee; of these deaths from "fever," 26 were certified as cerebro-spinal meningitis in Glasgow, eight in Edinburgh, two in Leith, and one in Dundee. The 11 deaths from measles showed a decline of six from the number in the previous week, and included five in Glasgow and four in Edinburgh. Of the 12 deaths attributed to diarrhœa six occurred in Glasgow and two in Perth; and of the six fatal cases of diphtheria three were returned in Glasgow and two in Greenock. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 118 and 103 in the two preceding weeks, rose again to 109 in the week under notice, but were 26 below the number in the corresponding week

of last year. The causes of 22, or 3·1 per cent., of the deaths registered in the eight towns during the week were not certified or not stated; in the 76 English towns the proportion of uncertified deaths in the week under notice did not exceed 1·0 per cent.

### HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 26·6 and 27·4 per 1000 in the two preceding weeks, further rose to 33·5 in the week ending April 27th. During the first four weeks of the current quarter the death-rate in the city averaged 28·9 per 1000, the rates during the same period did not exceed 16·5 in London and 17·6 in Edinburgh. The 251 deaths of Dublin residents during the week under notice showed a further increase of 48 upon the high numbers in recent weeks, and included 29 which were referred to the principal epidemic diseases, against 19 and 18 in the two preceding weeks; of these, 15 resulted from whooping-cough, ten from measles, two from "fever," and one each from diphtheria and diarrhœa, but not one either from scarlet fever or small-pox. These 29 deaths were equal to an annual rate of 3·9 per 1000, the rate during the same week from the principal epidemic diseases being 1·7 in London and 2·4 in Edinburgh. The fatal cases of whooping-cough showed a considerable further increase upon recent weekly numbers; and those of measles corresponded with the number in the previous week. Two fatal cases of cerebro-spinal fever were also registered. The 251 deaths from all causes included 53 of children under one year of age and 71 of persons aged upwards of 60 years; each of these numbers showed a marked increase. Seven inquest cases and seven deaths from violence were registered; and 89, or 35·5 per cent., of the deaths occurred in public institutions. The causes of six, or 2·4 per cent., of the deaths in Dublin were not certified; the percentage of uncertified deaths during the week did not exceed 1·0 in London and 1·6 in Edinburgh. The 170 deaths registered in Belfast during the week under notice included 27 referred to cerebro-spinal fever or cerebro-spinal meningitis, corresponding with the number in the previous week.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Deputy Inspector-General: J. Crowley to Haslar Hospital. Fleet Surgeons: E. R. D. Fasken to the *Cressy*, and W. E. Home to the *Excellent*.

In accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Richard Edmund Biddulph has been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated April 28th, 1907).

### ROYAL ARMY MEDICAL CORPS.

Colonel Matthew D. O'Connell is placed on retired pay (dated April 5th, 1907).

Colonel A. T. Sloggett, C.M.G., has been appointed to examine Militia and Yeomanry candidates for commissions in the Regular Army in London. Major A. E. C. Keble has been noted for appointment to Sierra Leone as Sanitary Officer.

### ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel Charles W. Thorp having reached the prescribed limit of age ceases to belong to the Army Medical Reserve of Officers (dated April 9th, 1907).

### IMPERIAL YEOMANRY.

*Northumberland (Hussars):* Hamilton Drummond to be Surgeon-Lieutenant (extra), under the conditions of paragraph 28, Imperial Yeomanry Regulations, 1906 (dated March 18th, 1907).

### VOLUNTEER CORPS.

*Royal Garrison Artillery:* 4th West Riding of Yorkshire: Surgeon-Lieutenant A. M. Connell to be Surgeon-Captain (dated March 19th, 1907). 1st Sussex: Thomas Sanders Worboys to be Surgeon-Lieutenant (dated March 1st, 1907).

*Rifle:* 2nd Volunteer Battalion the Prince of Wales's Volunteers (South Lancashire Regiment): Douglas Catterall Leyland Orton to be Surgeon-Lieutenant (dated March 15th, 1907).

### ARMY MEDICAL SERVICE.

An examination of candidates for not less than 30 commissions in the Royal Army Medical Corps will be held on July 25th next and following days. Application to compete should be made to the Secretary, War Office, London, S.W.

### CLASS FOR INSTRUCTION IN MILITARY MEDICAL ORGANISATION.

In consequence of the success which in the West of London attended the movement for initiating the formation of an organised Army Medical Civilian Reserve, it is proposed to hold another class this summer. The instruction will be given by specially experienced officers of the Royal Army Medical Corps at a convenient place for medical men residing in the metropolis. The importance of this class is increased by the certainty that trained civilian medical coöperation will have to form a part of the organisation of the new "territorial force." Gentlemen desirous of joining this class are requested to send their names to the acting honorary secretary, Mr. Herbert Chambers, 101, Goldhawk-road, London, W.

## Correspondence.

"Audi alteram partem."

### CEREBRO-SPINAL MENINGITIS.

*To the Editors of* THE LANCET.

SIRS,—Owing to the increase of this disease and to the alarming percentage of mortality in such cases, I venture to trouble you again with my opinion as to a possibly favourable treatment. Death is chiefly certified as finally due to coma; and I am sure this is a coma due to mechanical pressure, not to toxæmia. I therefore suggested in your columns last autumn the desirability of relieving this by surgical means. I then described a suitable operation for the purpose—viz., cervico-spinal laminectomy with capillary drainage in the serous stage, or tubal in the purulent condition that usually precedes a fatal issue. The operation on the fourth or fifth left cervical lamina is safe and quite easy, as I have now tried it on the cadaver although unable to try it on the living subject. The left lamina should be turned up as a flap, leaving its dorsal periosteum adherent; and if the treatment be successful, may be returned to its original position so as to leave no patent opening. At the critical point of the disease free drainage into copious antiseptic absorbent dressings may tide over the crisis and pave the way to recovery. The free use of leeches clearly saved two lives out of the nine cases I saw last autumn, and led me to feel that more thorough depletion or relief of tension might save many more. The suggestion has not been taken up, and I should not have troubled you by its repetition had the disease with its attendant serious mortality not increased to such an alarming extent. But till the "sero-peutists" have provided us with a reliable vaccine serum I think the surgeons should not neglect the obvious and yet dangerless method of relieving tension at a critical period of the disease.

I am, Sirs, yours faithfully,

Newquay, Cornwall, April 28th, 1907. ARTHUR W. HARE.

### HEART FAILURE DUE TO AIR EMBOLISM.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of April 27th, p. 1182, is a reference to a fatal case of air embolism. A fatal result usually implies a large and rapid entry of air. I have repeatedly noticed the entry of air into a vein, especially during operations on the neck, without the slightest ill effect on the patient. I have often seen air bubbles injected with the saline solution during intravenous infusion, no obvious harm resulting. A hissing noise, similar to that caused by the suction of air into a vein, may be produced by the passage of air between separated layers of muscle or fascia, when the space between these layers is opened and closed by respiratory movements. Therefore in a given case the mere occurrence of a hissing noise, the heart's action remaining unimpaired, is not proof positive that air is entering a vein. The rapid entrance into a vein of air, in sufficient quantity to

arrest the action of the heart, produces a surgical emergency in which prompt treatment can alone give the patient a chance of recovery.

Delore and Duteil,[1] in discussing the cause of death, hold that it consists not simply in obstruction of the pulmonary capillaries, but in an association of pulmonary embolism with weakening of the heart's action due to distension of the cavities on the right side. They suggest as treatment aspiratory puncture of the right ventricle. This minor operation is regarded by Delore and Duteil as quite free from risk and likely, if practised without delay, to be as beneficial on the human subject as it has proved to be on animals.

In carrying out this treatment I would add the following suggestions. After closure by pressure of the wound in the vein incise the skin prior to passing the needle, which can be manipulated more accurately when the resistance of the skin has been removed. Where available a fine trocar and cannula should be employed in preference to a needle, the trocar being removed as soon as the heart cavity is reached in order to prevent injury by the point of the trocar. If an aspirator is not at hand a reversed enema syringe may be fitted to the cannula, but in the absence of suitable apparatus the surgeon will probably be obliged to fall back on suction made with his lips in order to evacuate the blood-stained froth, a short length of rubber tubing being attached for this purpose to the cannula. Artificial respiration will be necessary and may assist in furthering the flow of froth and blood.

I am, Sirs, yours faithfully,

Plymouth, April 28th, 1907. C. HAMILTON WHITEFORD.

## THE USE OF ALCOHOLIC BEVERAGES.

*To the Editors of* THE LANCET.

SIRS,—Whilst this subject is being discussed in your columns I should like to point out a class of case in which the use of brandy or whisky is, in my opinion, of undoubted therapeutic value—viz., cases of retention of urine, either from an enlarged prostate or stricture of the urethra, in which patients have to undergo life-long catheterisation. It is my experience that men who make use of brandy or whisky as a drink escape cystitis from decomposition of the urine more frequently than do total abstainers, and I frequently administer half an ounce of brandy or whisky immediately after the operation. It revives the patient and makes him feel comfortable and happy. If alcohol is excreted by the kidneys and appears as such in the urine, and if it is an antiseptic its therapeutic value must be apparent.

I am, Sirs, yours faithfully,

Exeter, April 30th, 1907. JOSEPH A. W. PEREIRA.

## PHARYNGO-KERATOSIS TREATED BY APPLICATIONS OF SALICYLIC ACID IN SULPHO-RICINATE OF SODA.

*To the Editors of* THE LANCET.

SIRS,—In the report of a case illustrating the above, which I brought before the Laryngological Society at its meeting on April 5th, a very important fact, and, indeed, the one which gave the main value to the case, was omitted. This was to the effect that the condition—best known as pharyngo-mycosis—was well marked on both tonsils, but that after the patient had made a daily application of a 10 per cent. solution of salicylic acid in sulpho-ricinate of soda to her right tonsil only, a slow but steady diminution in the size and in the consistency of the spots on it was observed after a few weeks. The other tonsil remained as before until the same application was made to it also. This rigid experimental test showed incontrovertibly that the improvement was due to the application and not to any coincidental spontaneous disappearance such as we know to take place from time to time in this disease. It is generally agreed that the condition is really one of no importance, and if a patient can be persuaded to disregard it so much the better; for those, however, who are impatient of the condition, it is gratifying that there should be a method of treatment which has an unmistakeable action on the keratotic condition and which can be placed in their own hands. The action is, of course, analogous to that of salicylic acid upon warts, corns, and similar conditions, and the sulpho-ricinate of soda seems to be the vehicle with which it can be incorporated so as to be as unirritating as possible. In view of the policy I have above described of dissuading patients from submitting to treatment for this condition the opportunities for observing the effect of such treatment are obviously very few. Thanking you for allowing me space for this communication,

I am, Sirs, yours faithfully,

May 1st, 1907. DUNDAS GRANT.

[1] Revue de Chirurgie, No. 3, 1905.

## MEDICAL OFFICERS OF HEALTH AND RURAL DISTRICT COUNCILS.

*To the Editors of* THE LANCET.

SIRS,—In my annual reports to the Oulton Broad urban district council and the Mutford and Lothingland rural district council for 1905, when dwelling upon the Oulton Isolation Joint Hospital, the property of the above-mentioned authorities, I made the following comments:—

> The bathing accommodation is lamentably deficient, there is only one bath in the hospital, this is an ordinary wheel bath and this is not in a very good state, so that patients suffering from scarlet fever, diphtheria, and enteric fever all have to use the same bath. There is another bath at the institution, one in the caretaker's house, but that should be for the use of the staff only. Before a patient can be discharged he or she must go over to the house and take his or her final bath in this one. This, gentlemen, is far from what it ought to be; it is, to say the least, not nice for the staff. What is really required is a discharge room with a proper bath, etc., for each ward.

The hospital consists of four wards built upon the pavilion system, each ward being bedded for four patients, though more are admitted. One block, consisting of two wards, is mostly used for cases of typhoid fever and diphtheria; the other two wards are reserved for cases of scarlet fever.

In my annual report for 1906 which I am now forwarding you (on page 33) you will notice that that condition of affairs *re* bathing still obtained[1] and that I again drew the committee's attention to this lamentable condition of affairs. This report has caused several personal attacks upon myself at meetings of the committee. I was told that the report should not have been presented to the council and that no representations had ever been made to the committee that another bath had been required and that I ought to have apologised for having written such a report. At a meeting of the hospital committee held on the 5th inst. the member whose speech of the 25th inst. *re* cost of patients was reported in the *Eastern Daily Press* of the 26th inst., insinuated in a most aggravating form that my transaction bearing on a matter of the provision of shrubs to the hospital when the grounds were being laid out some two years ago might not have been of a honest and straightforward nature, and the direct impression conveyed to my mind was that I might have been a party to fraud. These hostile attacks culminated in the statements made as per reports of the two newspapers, which I beg to submit for your perusal.

It must come as a revelation to medical superintendents of isolation hospitals that it is a part of their duty on receiving a request for the removal of a patient to hospital to visit and examine the case asked to be removed for the purpose of verifying the diagnosis of the medical brother who has notified the case. What would the Local Government Board say on this matter? What would the medical profession think and say? Is it any wonder that the present Government contemplates taking away the administration of the Public Health Acts from the rural district councils? Is it possible to work in harmony with such bodies and at the same time do one's duty for the welfare of the districts? You will notice that what seems to me to be a direct attack upon myself is made by the member Mr. M. more particularly affecting the administration of the hospital. The figures quoted, as supplied to him by the clerk, I have not as yet had an opportunity of proving. He is wrong to start with, with regard to the number of patients admitted during the years of 1901 and 1902, he giving a much higher number than that actually admitted to hospital, as proved by the register of cases. My connexion with the hospital did not start until 1904. The whole of the figures are jumbled up, including establishment charges, salaries, and everything else. I am expected as medical superintendent to pay the staff, keep a record of all petty cash transactions; so well, so good. At the quarterly meetings of the committee I have to

[1] Since the report was printed another bath for patients has been supplied, but discharged patients still take their final bath in the bath supplied for the staff.

initial all bills presented for payment, including grocers, butchers, milk, drapery, chimney-sweeps, and every other tradesman, and, as you see from the report, am expected to work out the daily cost of maintenance per head, both for patients and staff. Does the medical profession consider these to be the duties of a medical superintendent? There is a clerk—a qualified solicitor—whose duty is it to get out these statements, his or mine? There is a matron. Is it the medical superintendent's duty to examine and check her provision accounts, drapery account, and every other petty account? I shall be glad of your opinion on these points and also any opinion which a medical superintendent may express bearing upon these questions. Would the Local Government Board sanction an inquiry as to my administration of the hospital? Thanking you in anticipation, I am, Sirs, yours faithfully,

SAMUEL J. J. KIRBY.

Oulton Broad, Lowestoft, April 29th, 1907.

## A DISCLAIMER.

*To the Editors of* THE LANCET.

SIRS,—I beg leave to disclaim any association with the medical part of the article which appears in the current number of *Great Thoughts*. In my capacity as President of the Ethological Society I was recently requested to grant an interview on the subject of ethology, which I did, but cautioned the interviewer that I could not allow any medical questions and that I should have to see a proof of the article. This was forwarded to me in due course and returned with my corrections.

To my surprise, on seeing the paper I found considerable additional matter of which I had no knowledge and which, contrary to my express instructions, had reference to my medical work. The offence was made worse by putting the words, which were collaborated from my books, as if spoken by me. I wrote at once to the editor, who replied expressing his regret that the additional matter "was inserted against my wishes" and explained that on "finding the interview was somewhat shorter than those we usually have I inserted the paragraph myself in order to fill up the page after you had seen the proof, as I thought it made interesting copy." Both editor and sub-editor tendered their apologies.

I am, Sirs, yours faithfully,

May 1st, 1907. BERNARD HOLLANDER.

## MEDICAL EDUCATION AND THE UNIVERSITY QUESTION IN IRELAND.

*To the Editors of* THE LANCET.

SIRS,—A recent annotation in THE LANCET entitled "The Irish University Question" emboldens me to write you a rather long letter. The question is one that concerns the education of Irish medical students acutely, but it is too often dismissed with a shrug of the shoulders because of its intricacy, which, I think, is more apparent than real. I venture on a statement of the situation in the hope that it will enable your readers to see what are the real difficulties, feeling sure that in this way the medical student of Ireland will secure their sympathies regardless of political or religious points. When a boil on the neck of a Unionist presents other characteristics than those of a boil on the neck of a Nationalist, when the dislocated shoulder of a Roman Catholic requires different treatment from that required by the dislocated shoulder of a Protestant, when Dublin influenza loses its similarity to Belfast influenza, the medical student will be interested, and interested fundamentally, in racial, religious, and geographical bickerings. At present he wants peace and opportunities for instruction.

Ireland possesses at the present moment the University of Dublin (Trinity College), the Royal University of Ireland (with an office in Dublin and colleges at Belfast, Cork, and Galway), and the Catholic University of Ireland, with its six constituent colleges of Maynooth, University (actually confused in English minds with Trinity College), Blackrock, Carlow, and Clonliffe. The result of this apparent wealth of educational opportunities is that medical education in Ireland is on the wane; we not only do not progress as England and Scotland do but we have begun to go backwards. Trinity College, Dublin, founded more than 300 years ago, has a distinguished past and a successful present. The reasons for tampering with it must be very strong before they can weigh against these facts. The Royal University of Ireland and the Catholic University of Ireland have at any rate no sentimental claims upon tender handling, and if any re-arrangement of university education promising medical and scientific students better chances should be persevered in, even though it should interfere with the present position of these institutions, I do not think their own professors would take a different view.

I make no claim to originality for much of what follows; I have adopted the views of well-informed men. The Royal University of Ireland was established by Lord Beaconsfield in 1879. At the old Queen's University which it superseded a boy *must* have been at the (legally speaking) undenominational colleges at Belfast, Cork, and Galway. But the Roman Catholics objecting to this mixed education, and supported in their objection by the unfortunate fact that the first professors in the three Royal Colleges were Protestants, boycotted the three Royal Colleges and founded in 1854 a Catholic University. Parliament, however, refused a charter to this university and until 1879 the State position was, as far as the Roman Catholic community was concerned, that they could use the undenominational colleges at Belfast, Cork, and Galway, or Trinity College, Dublin, where, as at the three Royal Colleges, the teaching was all in the hands of Protestants. Then came the Royal University of Ireland, founded, it would seem, with the rather Machiavellian intention of indirectly endowing Roman Catholic education. The result of this has been that the Roman Catholic students are examined for their medical degrees to too great an extent by their own professors while the students from Belfast, Galway, and Cork only receive occasional benefit in this way. This accounts, say the professors of Belfast, for the proud position in the honours list of the Royal University of Ireland enjoyed by University College, Dublin. University College, Dublin, needless to say, denies the impeachment, and attributes the admittedly high proportion of academic successes obtained at the University by their students to the application of the pupils and the zeal of the masters.

How does this position affect medical education in Ireland? There is perpetual friction kept up between North Ireland and South Ireland, all idea of the undenominational university is lost, the best students do not go in for the best examinations, the best men for educational posts do not necessarily get them, recrimination occurs between the leaders of thought who ought to be working hand in hand for the best education of the fine material supplied to them by their country. As far as medical education is concerned there is, it seems to me, but one remedy for such a state of affairs—the creation of two brand new universities for Ireland. It is the fact, a fact that will be considered reasonable by one school of thought and regrettable by another, that the Roman Catholics do not approve of mixed education; they will not, if they can avoid it, allow their students to be educated with Protestants, however clearly the rules of the particular institution show that unsectarian education is intended. Now, three-quarters of the population of Ireland are Roman Catholics, a fact which gives them an overpowering right to ask that their views should be met. But if a Roman Catholic university is started in Dublin an unsectarian university should be erected at Belfast, where the students of Belfast, Galway, and Cork could be examined for their medical degrees without the possibility of favouritism and in fair circumstances. Of course, it is dead against modern ideas to found universities with religious restrictions—the great universities of the world have abolished them—but the circumstances in Ireland are peculiar and it seems to me that all Irish medical men should press for the foundation of two new universities and *for peace*, without which the famous Irish medical men will grow less in number and influence. Trinity College, Dublin (Dublin University), would in this way be forced into no unsuitable alliance. The Royal University of Ireland would enjoy fair play and a Roman Catholic university would minister to the educational needs of a country that is largely Roman Catholic in creed.

I am, Sirs, yours faithfully,

CHARLES O'MALLEY.

*** Our correspondent's statement, contrary to his design, shows that the whole question bristles with difficulties. Many of them are not touched upon by the writer and most of them cannot be discussed in THE LANCET which is a medical paper. We publish this letter because he has approached the subject from the point of view of the medical teacher, but there is no solid support of his views, so far as we know, among his medical colleagues in Ireland.—ED. L.

## THE BUDGET.

*To the Editors of* THE LANCET.

SIRS,—The cruel and iniquitous income-tax, which is apparently to be maintained at the war level of 1*s*, weighs with special injustice on the medical man. His earnings are not income, properly speaking, but realisation of the capital of his health, strength, and life, and the remission of 3*d*. up to £2000 a year from all sources is totally inadequate as a recognition of this fact. Any method by which its incidence may be minimised is worthy of the attention of the profession, and I may perhaps be permitted to cite my own example.

In the first place, instead of making an allowance to my children, I divided my savings among them as far as was consistent with prudence. It is a long time before the interest on the subdivided capital reaches an amount which renders it liable to the tax, and the time when the total income from earnings and dividends amounts to £2000 is retarded. The amount of the death duty also is reduced. An attendant advantage is that boys early learn the value of money and become accustomed to financial responsibility, they are less likely to be spendthrifts than if they come into a considerable amount all at once. A further precaution is to insure largely, arranging that all premiums are to be paid at or before the age of 60, so that they do not become a burden when the earning power is reduced. Happily, in order to encourage thrift previous Governments have allowed life insurance premiums to be deducted from income liable to taxation. It is not amiss to make a part of the insurance payable at a certain age as a provision for evil days. Bonuses taken in cash instead of being added to the amount insured may perhaps be very welcome in some cases in old age. As a profession we are lamentably improvident, and if we are stung by injustice into better ways it may be good for us.

I am, Sirs, yours faithfully,

April 25th, 1907. M.D.

## THE RECENT CASE OF PHOSPHORUS POISONING.

*To the Editors of* THE LANCET.

SIRS,—According to White Paper Cd. 3373, the man Thomas Davis, engaged at Messrs. Morlands' match factory, whose death occasioned the inquiry referred to, was engaged in removing splints which had fallen on to the dipping table by means of a species of toasting fork, not engaged in pouring phosphorus composition on to the revolving table. The remover of the splints should not be exposed to phosphorus fumes to anything the same extent as the "dipper," who pours on the paste and attends to the removal of the frames. If the man had been employed as a frame-dipper or with the phosphorus paste it would have, I think, constituted a breach of the special rules. Apparently the direct cause of the poisoning was the conveyance of phosphorus to the mouth, *but* the fact that such a man was employed in what must always be a dangerous process, unless entirely automatic, raised the question alluded to in the first paragraph of your leader.

I am, Sirs, yours faithfully,

April 27th, 1907. M.R.C.S.

## THE ACTIONS OF FORMIC ACID AND THE FORMATES.

*To the Editors of* THE LANCET.

SIRS,—It is interesting in this connexion to note that many folk-lore stories relate that stinging or biting by ants will revive the dead. So we have the following story from Tasmania: "Two women were impaled by a sting ray and died. Two black fellows, the bringers of fire, who are now stars, took the bodies, laid them between great fires, and having collected many ants, placed them on their breasts. Severely, intensely were they bitten. The women revived, they lived once more, and are now the companions of the black fellows in the sky."[1]

I am, Sirs, yours faithfully,

April 30th, 1907. FORMICA.

[1] The Childhood of Fiction: a Study of Folk Tales and Primitive Thought, by J. A. Macculloch, London, John Murray, 1905.

## THE MARSEILLES MUNICIPAL ABATTOIR.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

IN describing the great Paris municipal slaughter-house of La Villette I related how the butchers constituted a privileged corporation. Their influence it was that defeated the excellent reforms introduced at the commencement of the last century. In many provincial towns the large slaughter hall was substituted for the private small shambles. But the corporation of the Paris butchers prevented the adoption of this principle when in 1810 the decree ordering the town of Paris to build public slaughter-houses was published. The worst of this is that other towns thought that they could not do better than follow the Parisian example. In Germany and in Switzerland, on the contrary, the example given in the French provinces was followed, while in France the provinces themselves abandoned what they had done so as to imitate Paris. It has taken not far short of a century to convince the French of their error in this respect. Perhaps one of the most remarkable illustrations of this fact is the new municipal slaughter-house of Marseilles. As the buildings were inaugurated in January, 1895, they may be considered as, comparatively speaking, new. What is more, the people of Marseilles are very proud of their public abattoir, and in a sense it does credit to the town. The buildings are well situated, they are well kept, they cost a great deal of money, and they may be described as almost palatial. Unfortunately, it remains the fact that a more modest style of architecture, less expenditure of money but a more scientific plan would have given better results. The fault, however, rests with Paris. The architect himself in his report on the subject states that he visited some neighbouring public slaughter-houses, that he only travelled 850 kilometres, and he rests his principal claim for the justification of his plan on the fact that he thoroughly examined the cattle-market and slaughter-house of La Villette.

The members of the Marseilles municipal council probably knew nothing whatsoever about the building of slaughter-houses, therefore they doubtless thought that if the architect's plan was based on what had been done in Paris they could not go far wrong in approving the scheme. This was, of course, the greatest mistake that could have been committed, for France was taking the lead in Europe in this matter till the fatal example given in Paris threw the whole nation back and now it is Germany which is first on the list. If the architect employed by the town of Marseilles had not visited the neighbouring abattoirs and had avoided Paris altogether but had gone to Germany instead he would have learnt something and could have put Marseilles at the head of the movement, instead of building in 1894 a public abattoir which is not so appropriately planned as the public slaughter-house in the town of Rochefort built in 1790 or as those built by the towns of Blois and Grenoble about a century ago. But what is even more remarkable is the fact that Marseilles used to possess in olden times a public slaughter-house which was planned much more in accordance with modern ideas than its present and new abattoir. There is a standard work on the subject entitled "Études relatives à l'Art des Constructions," written by L. Bruyère, formerly director of public works of Paris, and published in 1823. In this book Bruyère describes several slaughter-houses and he says: "Marseilles possesses a large abattoir situated outside the town and near to the lazaret. Its quadrangular plan is divided into three equal parts by a double row of pillars. The space in the centre is allotted to the carriages and the animals and people that pass to and fro. The two lateral portions serve one for the slaughtering and the other for the storage of the carcasses." As M. J. de Loverdo in *Les Abattoirs Publics* remarks: "This disposition appears altogether remarkable, for it seems to us analogous to what has been realised by the last improvements effected by German architecture. These three sections of the old Marseilles abattoir recall the general plan of the Breslau, the Offenbach, and other German slaughter-houses. The central part can be compared with the central hall of intercommunication reserved for carts and workers, and which connects the slaughter-hall that is on one side and the modern cold storage for the carcasses which is on the other side."

To build the new slaughter-house at Marseilles, which, at least theoretically, is not so well designed as the old

slaughter-house, the cost in space and money was greater than if the old plan had been utilised but on a larger scale. The modern abattoir is built in the Cabucelle quarter, well away from the town and on a height which dominates the Bay of Madrague beyond the Joliette docks. Close to the sea shore, conveniently near to the landing quays, there is a large cattle or sheep market. This is an abominable place. All the partitions are made of wood and it does not seem to have occurred to anyone that the risk resulting from the employment of wood might be reduced if it was frequently whitewashed. This market is used for the animals, mostly sheep brought over from Algeria. The absurd thing about it is that these animals are not killed on the spot. Many of them are sent by rail into the interior and put out to grass. On the other hand, on the summit of the hill overlooking this market and where the new slaughter-house has been built, there is a small but quite modern cattle and sheep market. The animals that are brought here, however, are killed almost immediately, so that it would not have mattered so much if they occasionally rubbed against some contaminated wooden partitions or stood on muddy, porous ground saturated with manure. The animals would be killed probably before any disease that they might contract had time to develop. In any case, it is obvious that the danger is much greater if cattle are to travel considerable distances. All markets should be properly constructed and properly drained, and the place where the animals stand should be water-tight and no contamination of the subsoil shall be possible. But if any exception to such rules could be tolerated it would be in regard to animals that are to be slaughtered at once. At Marseilles, on the contrary, the sanitary market is reserved for the animals that are to be killed and the insanitary market for the animals that are not to be killed. At most the animals that are bought at the cattle market adjacent to the slaughter-house may be kept for a night or two in stables prepared for that purpose and situated on the premises. From the sanitary point of view these stables are inferior to the market. They are paved with uncemented cobbles and as these stones give way and are displaced pools of liquid manure form in the hollows. The mangers are of wood and the stables are not as frequently or as thoroughly cleaned out as is desirable. Also, it may be noted that these stables are at some distance from the slaughter pavilions. These are built on much the same plan as at La Villette, but in Paris the stabling is nearer at hand and therefore more convenient.

There are three large pavilions for the slaughtering of horned cattle and sheep. As at Paris, each pavilion has a vast central space or court and on each side there are numerous partitions where the butchers may work in private. Some critics have expressed the opinion that these pavilions are not high enough. In any case, there seemed to me to be ample ventilation and light. On the occasion of my visit the greater part of the day's slaughtering was terminated, but there were still some animals remaining to be killed. Going among these I did not notice any evil odours. The viscera were promptly removed. The paunches, intestines, in fact whatever could not be swept out of sight into the drain, were promptly conveyed to carts and these carts are taken away daily by a dealer in manure. The floors of the slaughter departments are well cemented and drained and the fittings are for the most part of iron. All this I was assured was thoroughly scoured out twice a day and here and there wherever an accumulation of dirt occurs the place is washed at once. Thus partial cleaning is going on all day long. Outside there is a magnificent broad avenue planted with oriental plane-trees. Their luxurious foliage and gigantic leaves afford grateful shade during the hot days of summer.

On the opposite side of this majestic row of trees and spacious avenue there are smaller buildings. In two of these a number of persons, for the most part women, work at preparing tripe. This is always dirty, unpleasant work, and it is very necessary that it should be done under the strict surveillance of responsible municipal officers. Therefore the tripe dealers must come to the slaughter-house and are placed in lofty, well-lighted, and ventilated buildings. Here there is an unlimited supply of hot and cold water but the monthly charge is 32 francs (25*s.* 7*d.*) per tap and 6*s.* 10*d.* per seat. The place is divided into compartments, each large enough for 12 persons to work together under one employer. In another building the same sort of provision is made for preparing sausage skins, &c., and this likewise is a bye-product which cannot be produced without creating considerable nuisance. It is therefore well that these trades should be carried on in isolated specially constructed buildings well away from dwelling-houses. In all these respects the care taken and provision made at Marseilles are well worthy of commendation.

The slaughter-house for hogs is much more in accordance with modern principles than is that for horned cattle. It is a slaughter hall. Large flag-stones, measuring some 6 by 3 feet, are employed as tables and are easy to keep clean and are non-absorbent. The floors are cemented as also is the lower portion of the walls. There are iron cauldrons for scalding the pigs and there is no absorbent material anywhere. Perhaps, however, what is most to be praised at the Marseilles abattoir are the very admirable laboratory and physiological museum which face the main entrances. There extensive microscopic researches have been made and the veterinary surgeons have all the necessary space and utensils to pursue their scientific studies. The inspecting staff consists of a chief veterinary surgeon, two assistants, and 16 inspectors. The number of animals killed during the year 1905 was: bulls, bullocks, and cows, 33,150; calves, 29,802; sheep, 197,198; lambs, 40,311; and hogs, 39,923. Then there were also 7461 horses and mules and 405 donkeys slaughtered. The charges—that is, the payments made to the municipality for the use of the abattoir by the butcher—are: 3 francs 50 centimes per head for killing horned cattle, 35 centimes per head for sheep, 30 centimes per head for lambs, 2 francs 50 centimes per head for hogs (this includes the scalding for removing the bristles, &c.), and 1 franc 50 centimes per head for calves. Thus, taking the largest item, the 33,150 horned cattle at 3 francs 50 centimes each, this makes 116,356 francs (or £4654) income for the municipality. No fear is entertained that the debt contracted to build the slaughter-house will be paid off in course of time and then the public abattoir will provide a fruitful source of public revenue. From the public health point of view it would have been desirable that this institution should have been constructed more in accordance with modern discoveries and principles. Nevertheless, it affords many guarantees to the public. It removes from the town various industries, especially in regard to the bye-products, that are likely to give rise to a dangerous nuisance. It places these under strict surveillance. It focuses the cattle and the meat trade on one spot and renders the work of inspection easier and more likely to be efficacious. It also insures cleanliness. These are great advantages which the inhabitants of Marseilles have secured and upon which they are to be congratulated.

## SOME TURKISH LAZARETS

### AND OTHER SANITARY INSTITUTIONS IN THE NEAR EAST.

BY THE BRITISH DELEGATE ON THE CONSTANTINOPLE BOARD OF HEALTH.

(*With Reproductions of Photographs taken by the Author.*)

### II.[1]

*Means of Landing and Re-embarking the Pilgrims at the Lazaret of Camaran.—"Sambouks"—The Tug "Camaran."—The Landing Stages: the Two Jetties in the Bay and the Four Landing Piers for Pilgrims.*

SINCE the pilgrims land at Camaran solely to please the sanitary authorities the latter have to provide means for taking them from the ship to the shore and back again to the ship at the expiry of their term of quarantine. It will be convenient to consider, first, the means of transport between ship and shore; and secondly, the jetties at which the pilgrims are landed.

(*a*) "*Sambouks*" *and the tug* "*Camaran*."—The pilgrims are conveyed ashore in native boats called "sambouks." These craft vary much in size; the largest are nearly fifty yards, the smallest only some ten yards, long. They draw from two to five feet of water. They can carry from 30 to 100 pilgrims, the number varying with the size of the boat and also with the amount of luggage that the pilgrims have with them. The Persians and Javanese carry always a

[1] No. I. was published in THE LANCET of April 27th, 1907, p. 1182.

large quantity of baggage, while Indians as a rule, and particularly the poorer amongst them, have very little. The lazaret has at its disposal 15 of these sambouks of different sizes. Each year a contract is made with the owners specifying the conditions of their engagement for the season. A small sambouk is seen in the accompanying illustration (Fig. 1). Formerly these boats sailed, or were rowed, from the ship to the shore. But since 1905 the lazaret has possessed a tug, called the *Camaran*, which tows the sambouks. The gain in time and in every other respect has been considerable. The tug is a small steamer of 34 tons and 25 horse power; she is some 20 yards long and four wide and can make from eight to nine and a half knots an hour. This steamer, which was built in Constantinople for the Board of Health, has already proved most useful.

FIG. 1

Sambouk; pilgrims landing at the first landing stage.

(*b*) *The landing stages.*—The lazaret has six landing stages in all. Of these two are on the northern shores of the bay mentioned above and are used for all purposes connected with the administration of the lazaret; the other four are outside the bay, on the east coast of the island, and are used for the landing and re-embarking of the pilgrims. They may be briefly described in order.

FIG. 2.

The jetée du parloir. Machinery building, laboratory, and "parloir."

The *Mervani jetty*, so-called from its proximity to the Mervani plain (i.e., the plain to the north of the bay), is a well-built jetty near the inner end of the bay. It was rebuilt in 1904, constructed of two lateral walls of dressed stone, filled in between with stones *à sec*—that is to say, without mortar. The entire length of the jetty is 132 metres and the width three metres. The head, which is about 11 metres square, is built of artificial concrete blocks; a two-ton crane stands at the end of the pier. The rails of the Décauville railway run to the jetty head, and also a five-centimetre pipe which conducts distilled water to a tap at the end of the pier by means of which portable tanks in the sambouks can be filled and good drinking water thus conveyed to ships that need it.

The *jetée du parloir*, so called because at its end is the "parloir," or small house where the interrogation of coasting ships takes place, is also on the northern side of the bay, but much nearer its entrance than the other. It was built in 1899, is 83 metres long and two metres wide, and is constructed of armoured cement, resting on arches and piers composed of concrete blocks. This pier, which is seen in Fig. 2, is in excellent condition and is one of the most frequently used of all the piers.

FIG. 3.

The first landing pier for pilgrims.

The *first landing stage* for pilgrims ("Birindji"), built originally of stone *à sec*, has been repaired with cement. Its full length is 96 metres and its width 3·10 metres, except at the head, which is 8·5 metres wide. Rails run to the pier head. This pier is in a bad condition and requires thorough repair. At its end there are about 70 centimetres of water at low tide and 1·70 metres at high tide, so that the sambouks can nearly always come up to the pier head; in summer, when the tides are exceptionally low, they occasionally find a difficulty, but only for the short period of quite low tide. This jetty is well seen in Fig. 3. It serves for the landing of pilgrims for the first and second camps or "cordons."

FIG. 4.

Pilgrims wading ashore to the fourth landing pier.

The *second landing stage* for pilgrims ("Iraki") is situated between the second and third cordons. It is of the same construction as the first but in a still worse condition of repair. Attempts have been made to repair it with boards

and old rails, but it requires almost to be rebuilt, and the report of the Commission recommends, in addition, that it should be prolonged some five metres. Its present length is 48 metres and its width 3·60 metres, except at the head, which is 7·8 metres wide. It has no railway. This pier serves for the landing of pilgrims going to the second or third cordons.

The *third landing stage* ("De-Yr") is still further north. Its length is 117 metres and its width 3·40 metres; the head has completely disappeared. It is of the same construction as the other two and requires thorough repair and also lengthening by some 10 or 20 metres, the water at its end being very shallow. There is no railway along this jetty. It is used for landing and re-embarking pilgrims for the third and fourth cordons.

The *fourth landing stage* ("El-Kat-el-Kurush") is situated at the inner end of a bay, between the fifth and sixth cordons. It is 80 metres long and three metres wide, with a head four metres wide. It is built on eight arches and piles of dressed stone on a concrete base. It is in fair condition, but two of the arches are cracked and the pier is not nearly long enough. At low tide there are only 20 centimetres (about eight inches) of water at the head, and almost constantly the pilgrims landing here have to jump into the water up to their waists and wade ashore. They may be seen doing so in Fig. 4. It has been proposed to lengthen this pier by 60 metres, at an estimated cost of over £T.2700, but the inspection commission, for reasons which will be explained later, recommends the reduction of the long diameter of the lazaret to about one half of its present length, with consequent abandonment of the fifth and sixth existing cordons and also of this landing stage.

*Proposed new landing stage.*—At a spot between the present third and fourth cordons there is a small island a short distance from the shore and united to the latter by a sandy spit or causeway, except at high tide, when the island is completely cut off. The commission proposes to construct a new jetty, running over this causeway and out at the north end of the island. It will be almost in front of the second of the three disinfecting blocks to be described hereafter. There will thus still be four landing stages for pilgrims and, as will be shown in a later chapter, they will be quite as usefully and almost as symmetrically placed as at present.

When once the pilgrims are landed they are conducted, with their baggage, to one of the three disinfecting blocks. These buildings and the measures applied there will be described in the next article.

*(To be continued.)*

## THE OUTBREAK OF PLAGUE IN JEDDAH.

(FROM THE BRITISH DELEGATE TO THE CONSTANTINOPLE BOARD OF HEALTH.)

THE outbreak of plague in Jeddah is beginning to subside. It will be recalled that the present epidemic, which is probably a revival of that which prevailed there last summer, began about Jan. 8th. At the date of my last letter[1] the total number of cases recorded down to Feb. 3rd had been 23, and that of deaths 22. Since then the weekly returns have been as follows:—

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| From | Feb. | 4th | to | 10th | ... | ... | ... | 10 | cases, | 10 deaths. |
| ,, | ,, | 11th | ,, | 17th | ... | ... | ... | 20 | ,, | 19 ,, |
| ,, | ,, | 18th | ,, | 24th | ... | ... | ... | 32 | ,, | 30 ,, |
| ,, | ,, | 25th | ,, | March | 4th | | ... | 62 | ,, | 59 ,, |
| ,, | March | 5th | ,, | ,, | 10th | | ... | 35 | ,, | 35 ,, |
| ,, | ,, | 11th | ,, | ,, | 17th | | ... | 30 | ,, | 27 ,, |
| ,, | ,, | 18th | ,, | ,, | 24th | | ... | 44 | ,, | 43 ,, |
| ,, | ,, | 25th | ,, | ,, | 30th | | ... | 12 | ,, | 11 ,, |
| ,, | ,, | 31st | ,, | April | 7th | | ... | 29 | ,, | 29 ,, |
| ,, | April | 8th | ,, | ,, | 14th | | ... | 17 | ,, | 17 ,, |
| ,, | ,, | 15th | ,, | ,, | 21st | | ... | 14 | ,, | 13 ,, |

The total number of cases since the reappearance of the disease has therefore been 330 and that of deaths 317. It is a remarkable fact that, with the single exception of a fatal case of plague in a Javanese[2] pilgrim, the outbreak in Jeddah has been strictly confined to the native inhabitants of the town. A few other pilgrims did, however, develop the disease shortly after leaving Jeddah on their return journey home, and to these I shall refer again; but it is certainly noteworthy that, with plague epidemic, and fairly severely epidemic, in the town of Jeddah, the largest pilgrimage on record passed through that town twice—first, on the way to Mecca, and later after the completion of the Haj—and yet scarcely half a dozen of the pilgrims contracted the infection. I am inclined to attribute this relative immunity to the facts that the pilgrims do not stay long in Jeddah—not more than a few days as a rule, though in some instances it may be for much longer; that most of them lodge in houses specially built for the purpose, which are surveyed, cleansed, and whitewashed and put in order before the arrival of the pilgrims; and that those who are too poor to stop in houses camp out in the open air, where they are little exposed to the infection of plague either from contact with the inhabitants of the town or with rats.

There seems to have been much difficulty in applying measures for the suppression of the outbreak. The Arab inhabitants dread European interference more than the disease; the large majority of cases have only become known to the authorities after death and it is certain that many that recovered were never brought to the knowledge of the latter. Scarcely any of the cases have been removed to hospital. When a death from plague has become known the house where it occurred has been disinfected, but there must have been numbers of infected houses to which neither disinfection nor any other measure of prophylaxis was applied. Shortly after the revival of the disease in January it was proved beyond a doubt that rats were dying from plague and were in all probability the main channel by which the infection was being spread. A small reward, of the value of one penny, was offered for the bodies of dead rats, but there is no evidence at present that this measure led to any substantial results. The medical staff of the town was strengthened and an ample supply of plague prophylactic was furnished to them, but the latest reports show that it was almost impossible to induce the people to allow themselves to be inoculated. In some instances the opposition to the authorities took a more active form and violence was used. In one case a native woman—possibly interpreting too literally the injunction to heap coals of fire on others' heads—poured a torrent of hot ashes from a window on to the head of a disinfector who attempted to enter the house.

Outside Jeddah the following known cases of plague—which undoubtedly contracted the infection in that town—have occurred. Three persons arriving in Mecca from Jeddah developed the disease and two of them died. Two pilgrims on the return journey to India were landed at Aden with signs of plague and one of them died. Two other cases in pilgrims returning from Jeddah to the Yemen were landed at Camaran. Finally, among pilgrims returning northwards by the Suez Canal, two cases of plague have been observed, both at the Egyptian lazaret of El Tor. There have thus been, so far as is known, only nine instances in which the infection has been carried from Jeddah, and these have not given rise to any epidemic extension of plague elsewhere. Had Jeddah been as deeply infected with cholera as it has been with plague, it is easy to imagine how very different and how infinitely more serious to the rest of the world the result would have been.

Constantinople, April 24th.

[1] THE LANCET, Feb. 16th, p. 464.

[2] I should be glad of this opportunity to correct a slight printer's error which crept into my last letter. In column 2 of page 464 of THE LANCET, line 33, the word "Japanese" should be "Javanese." There are no doubt several Japanese Moslems; but during my stay in the Hedjaz last winter I did not come across, or indeed hear of, any pilgrims of that race. Javanese (a general term for pilgrims from the Dutch East Indies) are, next to Indians, usually the most numerous of all races in each year's pilgrimage.

## BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

*Our Hospitals and their Incomes.*

IN previous communications I have drawn attention to the comparative stagnation or actual diminution of the amount of subscriptions received by our hospitals, and on Friday last a most able article dealing with this matter and giving definite statistics appeared in the *Birmingham Daily Post*. The subject is one which must be of interest to all cities where there are many hospitals, and I have no hesitation, therefore,

in touching upon the matter again in the light of the extended information so recently provided, more especially as the conclusions which our leading daily paper draws from the investigations of its contributor are open to some doubt. Taking five of our principal hospitals, the General, the Queen's, the Women's, the Children's, and the Eye Hospital, it appears that 20 years ago (1886) the total income of the five was £34,069 and last year (1906) it amounted to £54,825. In 1886 the moiety derived from subscriptions was £12,963, and in 1906 this moiety had increased to £17,416—that is, in the former year the subscriptions formed a little more than 35·1 per cent. of the total income and in the latter year the percentage had fallen to about 30·7. In other words, there has been during the past 20 years a relative diminution of the subscriptions as contrasted with the total income. During the same period the number of in-patients received into the five hospitals has increased from 7134 to 10,297, and the number of out-patients from 10,297 to 159,032. One of the inferences drawn from these facts by the writer of the leading article in the *Daily Post* is that as the number of subscribers and the amount of subscriptions are falling off some of the committees should "concentrate their attention upon the acquirement of new subscribers," and he urges that nothing but a personal canvass will produce the desired effect. It is frequently stated that "the number of persons capable of giving a regular subscription to one or more institutions is far larger than is accounted for by a perusal of the subscription lists," but the evidence upon which this statement is made is not quite clear, and it by no means follows that because a given person has a certain amount of income or lives in a certain style he has any money which he can devote to hospital support, for frequently he has to spend the whole of the income he makes in maintaining those conditions of life which enable him to gain the income. Moreover, in considering this question of the relative diminution of hospital support by persons who have good average incomes, it must not be forgotten that the number of hospitals, dispensaries, and other charities is continually increasing, and taking the case of Birmingham the actual increase in the amount of subscriptions during the past 20 years as shown by the returns of the five hospitals referred to does not give a complete idea of the total increase of subscriptions during the whole of that period, for numerous other charities on various scales have been established or enlarged and their necessities have caused an expansion of the area over which subscriptions are distributed. It may still appear when statistics are available that taking all the newer institutions into consideration the amount of subscriptions is still showing reduction as contrasted with the number of patients treated and the total amount of income. If this should prove to be so the fact would not be surprising, for it must be remembered that the portion of the community from which subscriptions are drawn finds that the expense of living continually increases. We are in a period of extravagance, not only in public but also in private life, and at present there is no sign of a movement which shall tend to the reduction of those so-called "necessary" expenses which absorb money that otherwise might be devoted to charities. Further, the classes from whom hospital subscriptions are expected are feeling more and more the burden of taxation. Their incomes are taxed in unreasonable proportion for national purposes, they are taxed for the education of other people's children, and for the more or less complete maintenance of many of them. In these circumstances it is scarcely surprising that voluntary subscriptions for charitable purposes do not greatly increase, for it may be taken as certain that the more people are forced to do the less they will do in a voluntary manner. Looked at from this point of view it does not appear probable that a personal canvass will be very effectual in raising the amount of the subscriptions for any length of time, for it is not likely that the causes which militate against increase will diminish. In these circumstances, then, it becomes interesting to inquire into the amount given to the hospitals by the more popular Hospital Saturday Fund, which may be looked upon as the subscriptions of those who make most use of the hospitals. This Fund, under the admirable management of the committee, has considerably increased during the past 20 years, and it is therefore the more surprising to find from the statistics provided that the portion devoted to the five hospitals has diminished as contrasted with their total income. In 1886 the amount given from the Hospital Saturday Fund to the five hospitals under consideration was £4583, and in 1906 it had increased to £6975, or, in other words, in the earlier year it formed a little less than 13·5 per cent. of the total income and in 1906 a little more than 12·7 per cent. There is no doubt that the remainder of the Hospital Saturday Fund is well utilised, but in the circumstances it may be urged fairly that more of it might with advantage be devoted to the maintenance of the hospitals.

*The Health of Birmingham.*

For a considerable period we have rejoiced in a low death-rate and some of the more sanguine of us were hopeful that the time had come when the low rate would be practically permanent. We are inclined to feel disappointed, therefore, to find from the medical officer's report that whilst it is still low, 19·9 per 1000, it is higher than it has been during the first quarter of the year since 1904, but there is consolation in the knowledge that it is still below the average for the first quarter of the past ten years, which is 20·3 per 1000. Part of the increase appears to have been due to the very varying and inclement weather, for the number of deaths from pulmonary and pleuritic inflammations has been large. Measles also has been more than usually fatal, and the scarlet fever from which we have been suffering appears to have become more virulent, for its death-rate has risen to 4·7 per cent. Diphtheria and typhoid fever are also more prevalent than is desirable. The birth-rate for the quarter was only 29 per 1000.

*The Notification of Consumption at Coventry.*

Coventry has decided to follow Birmingham's lead and its sanitary committee has made arrangements for the voluntary notification of pulmonary tuberculosis. It was also decided at a recent meeting of the Coventry city council that Birmingham should be approached as to the terms on which Coventry might be allowed to utilise the proposed sanatorium which is to be established near Cheltenham, where it is suggested that 40 chalets should be erected as soon as possible.

April 30th.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

*The Health of Liverpool.*

THE birth-rate in Liverpool for the week ended April 20th was 35 per 1000. The death-rate was 20·1 per 1000, compared with a mortality of 23·5 per 1000 a year ago. The zymotic cases in hospital were: small-pox, 4; scarlet fever, 372; typhus fever, 7; typhoid fever, 42; diphtheria, 37; and in isolation, 63. This time last year the epidemic of measles was accountable for the higher death-rate.

*St. Helen's Hospital: Workmen's Contributions.*

The thirty-fourth annual report of the St. Helen's Hospital showed that, in spite of the large growth of expenditure consequent on the enlargement of the hospital, the income for the year had grown correspondingly owing entirely to the highly satisfactory increase in the penny-a-week contributions of the working men, which amounted to £3198, against £2478 in the previous year. During the year 829 patients had been treated, against 707 in the previous year. The hospital has sustained a great loss by the death of Sir David Gamble, Bart., who was one of its warmest supporters.

*Epidemic of Measles at St. Helen's.*

The medical officer of health (Dr. J. J. Buchan) has submitted a lengthy report on the epidemic of measles among school children to the St. Helen's health committee. He stated that the history of measles during the last 30 years in St. Helen's showed that the disease had been almost constantly present, breaking out in epidemics of greater or less severity every two or three years. The epidemics exhibited themselves in two forms, a major and a minor variety. In the major epidemics the disease had appeared in the earlier part of the year and assumed a more virulent type than in the minor ones, which contributed less to the death-rate. The disease was spread by personal contact with the sufferer, particularly in the early stage of the illness, the infection then being apparently given off by the discharges from the throat, nose, and lungs. The actual cause of the disease had not so far been discovered. Measles appeared to be spread to a

very great extent by school influence, acting by the attendance at school of actual sufferers from the disease. Evidence is still wanting in St. Helen's that healthy "contacts" had introduced the disease to the schools. Measles was present at the end of the year and became epidemic in January. The number of families apparently affected had been about 930 and the number of cases among these was 1800. With regard to the exclusion of scholars living in infected houses in St. Helen's, there has never been any rule laid down by the health committee on the matter; the same general rule which applies to the exclusion of scholars from any cause is held to apply in St. Helen's. He recommended to the committee that it should be remitted to the secretary for elementary education and himself to draw up draft regulations for the exclusion of "contacts" with infectious diseases, similar to those adopted now by several authorities in the large towns.

April 30th.

## WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

### *Cardiff Infirmary.*

DURING the past few years it has been customary for the board of management of the Cardiff Infirmary to issue, in connexion with its annual report, a supplementary report pointing out what are the needs of the institution as regards extensions and improvements. As a result many important additions have been made, including an operating theatre, casualty wards, and a new out-patient department. The last supplementary report suggested additional accommodation for 64 patients and other extensions to cost altogether £30,000. This would increase the accommodation to 250 beds. That this would not be too great is shown by the fact that there are constantly between 500 and 600 patients awaiting admission to the wards. For it must not be forgotten that the institution serves not only Cardiff but the large colliery districts of the Rhondda Valleys, Aberdare, and Merthyr, where there is a population approaching half a million persons. The appeal of the board has already met with a favourable response, Mr. John Cory, J.P., having promised to give £5000, provided the remaining £25,000 are subscribed within six months.

### *Meat Inspection by the Police.*

It has been pointed out more than once that the difficulties of meat inspection in Cardiff arise almost entirely in connexion with meat which is slaughtered outside the borough. There are no private slaughter-houses in the town and inspection at the public abattoirs is a comparatively easy matter. Dr. R. Prichard, medical officer of health of the Llandaff and Dinas Powis rural district, which adjoins Cardiff, has recently made a suggestion for increasing the efficiency of the inspection in rural districts. He points out that the county police already take samples for analysis under the Sale of Food and Drugs Acts and administer the Contagious Diseases (Animals) Acts, and he proposes that they should visit the slaughter-houses on their beats and inspect any carcass that may be there. Dr. Prichard admits that the ordinary policeman is not a trained meat inspector, but he thinks "that a lesson or two from the county medical officer of health would be enough to enable him to distinguish diseased meat from what is not."

### *Isolation Wards of the Bristol General Hospital.*

Special wards for the observation and isolation of suspected cases of infectious disease are now recognised as a necessary part of the equipment of general hospitals. Their absence must not only increase very considerably the anxieties of the resident staff but must also add to the difficulties and cost of administration. It is gratifying, therefore, to be able to record the completion of the isolation block which has recently been erected in connexion with the Bristol General Hospital. The building is of two storeys, each with a distinct entrance. On the ground floor are two wards for two beds and one for one bed. Between two of the wards is a nurses' duty room. Leading out of each of the larger wards is a circular sanitary annexe, containing water-closet and slop sink, with cross-ventilated passage. There is a portable bath for the use of all the wards. The remaining rooms include bedrooms for two nurses, bath-room, water-closet, and store room. The arrangement of the first floor is nearly the same as that of the ground floor, the difference being in the provision of a nurses' sitting room and the exclusion of a bath-room. The characteristics of modern fever hospitals, including the rounding of corners and the absence of ledges, have been applied to the wards, and the Gilmour hardwood doors have been used. These are made of small pieces of wood laid grain against grain and finished with an absolutely flush surface on both sides. There are fireplaces in the wards and other rooms, and the building is also heated with low pressure hot water pipes and radiators. The lighting is by electricity and the air can be extracted by an electrically driven fan. The cost of this building, which is quite separate from the main hospital buildings, was £5500, by no means an extravagant sum considering the accommodation which has been provided.

April 30th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Cerebro-spinal Fever in Edinburgh and Leith.*

THIS fever is increasing in Edinburgh. According to the report submitted to the public health committee, 35 cases have occurred since the beginning of the month. The first case reported in the city was in January and in the month of March 31 supposed cases were reported and 18 deaths occurred. Of the 35 cases reported in April up to the date of the meeting (April 23rd) twice as many occurred in the old town as in the new town. During the month there were 24 deaths. The disease is also present in Leith, where the medical officer of health has been examining bacteriologically the throats and noses of persons who have been in contact with cases. The families of patients have been isolated and "contacts" who are not isolated have their noses and throats disinfected. The houses where cases have occurred are being thoroughly disinfected as well as the belongings of the inmates. There has been a reduction in the number of cases notified in Leith. Dr. W. Robertson's report will be waited for with unusual interest. There is no aspect of the disease so unsatisfactory and even alarming to the public mind as the knowledge that the channel by which infection enters the body is not known and that it is consequently impossible to know what special precautions to take.

### *Edinburgh Public Health Estimates.*

It is always interesting to note the cost of administering the public health arrangements in a large city and the estimates for the incoming year, which begins on May 1st, have just been before the public health committee. The estimated expenditure amounts to £30,795. Some of the items going to the making up of this amount are: medical officers, £1765; sanitary inspectors, £3985; burgh engineer's department, £1005; reporting infectious diseases, £350; Colinton Mains Hospital, £19,350; Portobello Hospital, £410; and Campsie Convalescent Home, £955.

### *Royal Visit to Glasgow.*

The visit to Glasgow of their Royal Highnesses the Prince and Princess of Wales was accomplished last week under the most favourable auspices. The city was profusely decorated in their honour, the weather was propitious, and notwithstanding the multitudes that kept holiday and crowded the streets there was almost an entire absence of serious accidents. Their Royal Highnesses during their visit, which extended from Tuesday to Friday, were the guests of Lord Blythswood at Renfrew. On the first day there was a reception in the St. Andrew's Halls; in the afternoon the new laboratories at the University were inspected and formally opened by the Prince. The next day was occupied in laying the foundation stone of the new Royal Infirmary, followed by a luncheon at the Municipal Buildings; while on the last day of their visit their Royal Highnesses visited Clydebank and inaugurated the new Rothesay Dock which has just been completed there. The scene at the University was exceptionally brilliant. A crowded and distinguished gathering representative of the academic, civic, and other interests assembled in the Bute Hall, where the ceremony of conferring the honorary degrees took place. Among those who received the degree of LL.D. were the Prince and Princess of Wales, the Lord Provost of Glasgow, Mr. Wyndham (late Lord Rector), Mr. Asquith (present Lord Rector of the University), and Professor J. G. McKendrick. The degrees were conferred by Lord Kelvin, Chancellor of

the University. After this ceremony the new laboratories were inspected and declared open. These buildings—one housing the departments of physiology, forensic medicine, and materia medica, and the other the department of natural philosophy—have been in the course of erection for several years. It is interesting to note in this connexion that it is exactly 60 years since Lord Kelvin, in a cellar of the old college, inaugurated the first physical laboratory for students in Europe. Afterwards luncheon was served in the large natural philosophy laboratory which had been specially prepared and decorated for the occasion. The scene at the laying of the foundation stone of the Royal Infirmary next day was no less brilliant. It will be recollected that the infirmary erected in 1791 was found to have become out of date in all important respects and it was resolved to rebuild it entirely and to dedicate it as a memorial to Her late Majesty Queen Victoria. It was the foundation stone of the first block under this new scheme which was laid on Wednesday. In laying the stone the Prince made a graceful reference to Lord Lister whose early work in antisepsis was carried out in this infirmary and whose eightieth birthday has just been celebrated. Before leaving the infirmary the Prince handed £100 to the chairman of directors for the reconstruction scheme. Both at the University and the infirmary much gratification was caused by the evident and sympathetic interest of their Royal Highnesses.

*Aberdeen Royal Infirmary.*

The staff of resident medical officers at the Aberdeen Royal Infirmary has now been increased from four to six. According to the old arrangement each medical officer had charge of a medical and a surgical ward. It is now proposed to give each resident charge for six months of a surgical ward and for another six months of a medical ward. The newly-appointed residents are Dr. N. S. Gilchrist, Dr. G. Mitchell, and Dr. A. T. Pirie, while Dr. J. Raffan, one of the retiring residents, has been appointed for a further period of four months.

*Cerebro-spinal Fever.*

The outbreak of this fever in Aberdeenshire has now, to all appearance, been checked. In all there have been six deaths. Only one case has been notified in the city.

*Diseases of the Eye in School Children.*

In connexion with the serious epidemic of conjunctivitis and trachoma among the children attending the board schools in Aberdeen during the past winter a deputation from the directors of the Ophthalmic Institute had an interview during the past week with the members of the administrative committee of the school board. It was pointed out by the deputation that owing to the serious epidemic much additional work and expense had been thrown upon the institution, the cases having run into many hundreds. The board considered that but for the voluntary offices rendered by the institution it would have been necessary to appoint a medical officer of its own, and it therefore agreed to give a grant of £40 to the institute.

*Medical Questions at the Trades Congress.*

At the Scottish Trades Congress held in Aberdeen, a motion by one of the Aberdeen representatives—

> That this Congress is of opinion that the law in regard to the question of vaccination should be the same in Scotland as it is in England, that the conscience clause should be or ought to be as essential to a Scotchman as it is to an Englishman—

was carried by a large majority. At the same Congress Mr. Hendry Brechin moved:—

> at in the opinion of this Congress the Education (Scotland) Acts should be amended so as to make it compulsory on school boards to provide for the medical examination of all children on entering school, and periodically throughout their school life; and to give powers to school boards to provide medical appliances for the correction of physical defects where necessary.

The motion was unanimously adopted.

April 30th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

*Anatomical Teaching in Dublin.*

A RESOLUTION was recently adopted by the North Dublin union which with other provisions directed that notices should be posted in all the wards and corridors warning the inmates that if they did not give specific directions to the contrary their bodies—if they died—would be sent to the schools of anatomy. This resolution has caused much trouble in the anatomical and surgical schools. Dr. J. C. McWalter, who is a guardian, said that it would be a cruel and disgraceful thing to frighten poor people coming into the union by drawing their attention to the matter. Dr. A. Fraser, professor of anatomy at the Royal College of Surgeons, has addressed the following letter to the board of guardians:—

> SIR,—I am directed by the anatomical committee, which represents the Medical School of the Catholic University, the Medical School of Trinity College, and the Medical School of the Royal College of Surgeons in Ireland, to draw the attention of your board to the very serious consequences which will inevitably follow from the stringent application of the motion which they passed on the 17th inst. These consequences, the results of which cannot be foreseen, may be briefly summarised as follows: (1) The absolute ruin of the three Dublin medical schools; (2) thus depriving young Irishmen of obtaining a medical education in the capital city of their own country; (3) the disastrous effects on the city generally from the enforced banishment of the young Irishmen who intend to follow a medical career. The representatives of the three medical schools are confident that the necessity on their part of forwarding this letter would never have arisen had the guardians been aware of the consequences of the passing of their motion, and they venture to express the hope that the guardians may be kind enough to reconsider their decision. Should it be thought necessary the committee will gladly forward a printed statement to each of the guardians, or a deputation can be arranged to wait upon them, and afford them any further information they may require.

*Cerebro-spinal Fever in Belfast.*

At a meeting of the public health committee held on April 24th it was reported that for the week ending April 20th the death-rate from all causes had been 23·9 per 1000. 36 cases of cerebro-spinal fever had been notified during the week, as compared with 24 in the previous week. Altogether, up to April 24th 337 cases have been reported in Belfast with 227 deaths. Of the 107 patients in Purdysburn fever hospital up to April 24th, 43 were suffering from cerebro-spinal meningitis, and ten out of 12 deaths occurring during the week in that institution were caused by that disease. Since the 24th up to to-day (April 30th) six more cases of cerebro-spinal fever have been admitted to Purdysburn city hospital.

*Bangor Cottage Hospital.*

A committee appointed at a public meeting held in Bangor, county Down, on April 22nd to confer with Lady Clanmorris regarding the carrying on of the work of the hospital in that town, has handed in its report, and at a public meeting called on April 24th it was decided to take over the Cottage Hospital with equipment as from June 1st next and to do all things necessary for administering the affairs of the institution, including the appointment of officers, board of management, and committee. Further, it was agreed that the committee should act on behalf of the town and district in regard to providing a new hospital suitable to the needs of Bangor and the neighbourhood.

*The Belfast Health Commission.*

The sittings of the Belfast Health Commission were resumed on April 25th and since that day evidence has been taken among others from the following in reference to the water-supply of Belfast: Professor J. L. Smith, Professor W. St. C. Symmers, and Mr. L. L. Macassey, C.E., consulting engineer to the Belfast water commissioners.

*The Proposed Sanatorium for Cork Consumptives.*

The Local Government Board has given its decision with regard to the application of the Cork conjoint hospital board for permission to erect a sanatorium at Myshall. It will be recollected that the proposed site is on the bank of the Tullig river, which is a tributary of the Lee, from which the citizens of Cork derive their water-supply. At the inquiry held last February it was pointed out that patients would be likely to expectorate into the river and that the disease might in that way be communicated to the inhabitants of Cork. Furthermore, it was contended that no matter what steps would be taken to purify the sewage its conveyance into the river would be a constant menace to public health. Further expert opinion has now been taken with regard to sewage disposal and the possibility of tubercle bacilli surviving sufficiently long in the water to prove a danger to Cork but no unanimous views were arrived at. In the course of giving its decision the Local Government Board stated that it "does not, however, consider that it would be warranted in making a Provisional Order in view of the very strong opposition of the citizens of Cork as put forward by their elective representatives, and while, as already stated, it thinks that the prospect of contamination of the water-supply is very remote, it realises that a feeling

of great uneasiness might very possibly be caused in the city from the fact that a sanatorium for tuberculosis was constructed upon one of the sources of the water-supply." This decision of the Local Government Board was received with great satisfaction by the citizens of Cork generally because, apart from danger altogether, they strenuously objected to the disgusting idea of being called on to drink water which had received the dejecta and sputum of consumptives.

April 30th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Abortion.*

AT a recent meeting of the Obstetrical Society an important discussion was commenced upon abortion, more especially the criminal variety. M. Boissard, the first speaker, gave an account of cases of abortion which had come under his care in his wards at the Tenon Hospital. He stated that the number of criminal abortions was constantly increasing and that in a very disquieting fashion. He admitted that—in the absence of a direct history from the patient, which, of course, was difficult to obtain—the abortion had been criminally brought about; that he relied for diagnosis of criminal intent upon a rise in the temperature and signs of infection. Spontaneous abortion is not, as a rule, due to infection and does not give the above-mentioned symptoms. For treatment he advised active measures and immediate curetting. M. Tissier also spoke of the increase in the number of abortions and blamed the light view which was taken of the practice by the magistrates and the general laxity of morality which was encouraged by certain modern views according to which limitation of families was not a crime. Among the higher classes, he said, women had no shame in avowing that they had had abortion procured, as if it were quite the natural thing to do. The class which made up hospital patients was, however, much more reticent. M. Tissier thought that the society should organise a strong protest against such practices. M. Blondel agreed with the two former speakers. He added that the airy way in which abortion was looked upon in Paris made foreigners think that it was permitted in France. For his own part he had every year to send away from his consulting-rooms sundry English women, both married and unmarried, who had crossed the Channel simply to have abortion brought on, and who in some cases had the impertinence to allege that they had been sent by their medical attendants.

### *Congress of Medical Practitioners.*

A congress of medical practitioners was held at Paris from April 12th to 14th. 14,000 medical practitioners had sent in their names as approving of the objects of the congress. 100 medical societies, some of them having many thousands of members, such as the Association des Médecins de France, the Union des Syndicats Médicaux, and the Concours Médical, had subscribed to the funds of the congress. Many members of the Faculty of Medicine and of the Academy of Medicine took part in the discussions upon the question of the reform of medical education, and the press in general has treated the congress as a remarkable event which will be a landmark in the history of French medicine. The opening discussion dealt with medical education and it was pointed out that many reforms might be made in the education given at hospitals. The hours of visits and of lectures in the wards of a hospital should be so arranged (*échelonnées*) that the student could attend several during one term. The State faculties of medicine should be able to apply to private cliniques for clinical material as is the custom in provincial schools. The income of the various medical faculties is extremely small. It is some 20,000,000 francs inferior to that of Germany and the State ought to be applied to for subsidies. The number of professors is not sufficient for the number of pupils and the congress adopted unanimously a resolution stating that the hospital should be the centre of instruction from the point of view of clinical medicine and therapeutics. As to reforms of teaching in the faculties the general view taken was that these faculties would honour themselves by engaging well-known personalities for their various posts and for their educational work. The mode of supplying professors was variously looked upon, some demanding the institution of *privat-docenten* as in Germany and adding that this plan could perfectly co-exist with the present state of matters. The question of the reform of the *concours de l'agrégation* was lightly touched upon. Other questions debated were that of payment of a professor by his pupils and that of absolute freedom of choice being allowed to every member of a friendly society to choose his own medical man and his own druggist. Another question debated was that of vacation classes and post-graduate courses of lectures (*l'enseignement complémentaire*). Finally, the congress demanded a weekly day of rest for medical men or else the fixing of a tariff which would make it legitimate for double fees to be charged for Sunday work. An enormous quantity of questions were debated more or less fully, and if many of them have not found a solution it can nevertheless be stated that this first meeting of medical men has been of great use in the debating of such questions and also shows that they occupy the attention of very many medical men. It is probable that at the next meeting the matters will have ripened and that very likely some practical solutions will be arrived at.

### *Constipation and Hypothyroidia.*

At the meeting of the Biological Society held on April 13th M. Lévi and M. H. de Rothschild communicated a paper in which they stated that they had treated sundry cases of constipation by thyroid medication. The youngest case was aged three and a half years and the oldest 63 years. All the patients showed symptoms of hypothyroidia, such as migraine and chronic rheumatoid arthritis.

### *Typhoid Fever caused by Oysters.*

At the March meeting of the Biological Society M. Netter reported a series of cases of typhoid fever in which the evidence of the disease having been caused by oysters is quite irrefutable; the facts were communicated to him by Dr. Villanex. Two families living at a distance of two kilometres apart divided a basket of oysters from the Olonne beds; these were eaten by both families at their *déjeuners*. The oysters were fresh, in fine condition, and were pronounced excellent. In the first family there were 11 persons, of whom six partook of the oysters; in the second nine, of whom five ate them. Of the 11 persons who had eaten them ten became ill (i.e., 91 per cent.) and four developed typhoid fever (i.e., 36·4 per cent.); there was one death (i.e., 10 per cent.). None of the other nine persons who did not eat any oysters became ill.

April 29th.

## COPENHAGEN.

(FROM OUR OWN CORRESPONDENT.)

### *Death after a Tracheal Operation in which Cocaine was Used.*

AT the last meeting of the Danish Oto-Laryngological Association Professor E. Schmiegelow communicated a note on a case in which he had removed a grain of maize from the right bronchus of a girl, four years of age, by means of Killian's superior tracheoscopy. The foreign body had been in the bronchus for about eight days, when the little patient came under Professor Schmiegelow's care. It could be easily seen after the administration of chloroform but the extraction proved very difficult, partly because no suitable hooks were available for use. More than an hour elapsed before the attempts were successful, and it was necessary to apply between five and six cubic centimetres of a 10 per cent. solution of cocaine chloride to the mucous membrane of the respiratory tract. Soon after awakening from the anæsthesia the patient became very restless and shortly afterwards convulsions set in. Some hours later she died from what Professor Schmiegelow did not hesitate to diagnose as acute cocaine poisoning. Dr. P. Jetens Hald called attention to the cases of death from acute cocaine poisoning observed up to now in patients who had undergone tracheo-bronchoscopy. There were at least three deaths on record, two in America and one in Switzerland.

### *A New Operation for the Removal of the Urinary Bladder.*

At a recent meeting of the Medical Society of Copenhagen Professor Thorkild Rovsing read a paper on an improved operation for the complete extirpation of the urinary bladder. There were great disadvantages connected with the older methods, especially because the way in which the ureters

were disposed of was anything but satisfactory. Whether the ureters were left in the wound produced by the operation or were implanted into the rectum, the result was in either event very often disastrous, because both methods almost necessarily led to ascending infection of the kidneys, the first method also very often causing cicatricial stricture of the ureteral orifices, with subsequent hydronephrosis. The chief original feature of Professor Rovsing's operation was the way in which he avoided the above-mentioned dangers. After the complete extirpation of the bladder he frees the ureters entirely by dissection for a long distance and he then makes a buttonhole-like opening in either lumbar region, extending from the peritoneal cavity to the skin of the back. Through this slit the ureter of the corresponding side is pulled out so far that the mucous membrane of its outlet can be sutured to the skin in the lumbar region surrounding the slit. Stricture of the ureteral outlets is thereby avoided. In order to collect the urine trickling out from the ureters a specially constructed silver vessel is applied in either lumbar region round the ureteral openings, and from these vessels the urine flows down through indiarubber tubes to a portable urinal of the ordinary sort. This appliance has proved satisfactory as a means of escape for the urine and the patient has been entirely free from any urinous smell. Dr. Niels P. Ernst suggested a possible improvement in the operation. He asked if it would not be well to pull the ureters out through the buttonhole for a distance of about one inch or so and then to encircle them with a flap of the surrounding skin, so that a penis-like prominence was created in either lumbar region on the top of which prominence the ureter had its outlet. He thought that it would be easier in this way to make sure in all cases of the sufficiency of the silver vessel than when this latter had to be applied to a level or perhaps even a hollow surface

*The Royal Frederic Hospital.*

On March 30th at the Royal Frederic Hospital the 150th anniversary of its foundation was celebrated. As this hospital has been connected with the University of Copenhagen for the last 100 years or more for the clinical instruction of the students it plays a prominent part in the recollection of all Danish practitioners. When first established it was certainly better than most European hospitals of that time, but it is not in accordance with modern ideas, and the addresses delivered at the festival did not express deep sorrow at the prospect that the venerable institution would soon exist only in memory. In a few years the University will possess a model hospital that is now being built in the north of the city at considerable expense. This new hospital is nearly on the same system as the Virchow-Krankenhaus in Berlin. It will take the name of Rigshospitalet (the State's Hospital), so that even the name of the Royal Frederic Hospital will disappear.

*The Royal Board of Health.*

Considerable sensation has been created by the somewhat abrupt manner in which the Royal Board of Health has come to an end after having carried out its important task for more than a century. The board has till now been the highest authority on all hygienic, medico-legal, and medico-political questions. Nine of our most prominent medical men and two apothecaries were nominated by the King as members of the board, an office that was entirely honorary and not endowed with any salary whatever. All difficult medico-forensic questions were referred to the board and it had the supervision of the professional conduct of all Danish practitioners and apothecaries, the superintendence of the lunatic asylums of the State, &c. Until five years ago, when the present Minister of Justice became a member of the Cabinet, the decisions of the board in questions involving expert opinion were always accepted by the Minister of Justice, under whom our whole medical system is placed. But in the course of the last five years the board had been insulted over and over again, the Minister either neglecting to ask for its opinion on important questions of medical interest such as the legislative enactments dealing with tuberculosis and prostitution, or else acting contrary to its advice. As the members were nominated directly by the King they complained to him of the Minister in December, 1906. The Minister's reply was a sarcastic speech in Parliament. The members of the board then expressed an intention of resigning, but the Minister answered that the board could not be allowed to retire from office unless it could secure successors willing to take the places which would become vacant. This last insolence finally proved too much and not long ago the members resigned in a body, disregarding the Minister's threat that he would call them to account for their illegal behaviour. It has been impossible for the Minister to find medical men willing to serve on a new board and he has been obliged to acknowledge his defeat by nominating a "homo novus" as medical adviser to the Government.

April 27th.

## ITALY.

(FROM OUR OWN CORRESPONDENT.)

*"La Croce Verde."*

"THE Green Cross" is an offshoot of the Red Cross and in the great Italian centres is already justifying its inception and organisation by prompt and effective work. Both associations, indeed, have their prototype in the "Misericordia"—a purely Tuscan institution enlisting in its humane service every member of society, high and low, rich and poor. With the growth of population and the increasing complexity of life, however, the "Misericordia" has proved, even in its limited area (Florence, Pisa, Leghorn, Lucca, Siena, and Arezzo, to mention its chief centres in Tuscany), inadequate to the calls upon it, and so we have of late years witnessed the Red Cross going outside its professed military scope and now the Green Cross supplementing it in turn. In Milan this latter has been organised with special forethought and efficiency, thanks to medical sympathy and coöperation, and its *personnel*, recruited mainly from the young of both sexes of the humbler class, is—again thanks to medical inspiration and support—trained to the work by systematic instruction in "first-aid" service of every kind. Philanthropic physicians and surgeons give evening lessons in rudimentary anatomy and surgery and in what may be called the "clinique of the pavement" or the "therapeutics of the thoroughfare," so that in cases of accident or sudden lesion (all too common in the seething centres) the patient is intelligently dealt with and transported with the least possible delay to the dispensary or hospital. The interest taken in the work by the shop girl or the factory hand is at once gratifying and reassuring—gratifying as showing the reserve fund of good latent in the class so often prolific of the "hooligan," and reassuring for its demonstration of a remedy for that characteristic development of overcrowded cities. In truth, the "hooligan," or his Italian equivalent the "teppista," is as often as not the outcome of sheer animal spirits chafing under restriction and only requiring an outlet for the energy he revels in to become an agent of good instead of evil. This fact, borne in upon the organisers of the Italian "Green Cross" by daily experience, has an interest of its own for the social reformer and may yet inspire other efforts for the humanising of the modern counterpart of that "London 'prentice" immortalised in Scott's "Fortunes of Nigel." If, according to Lord Palmerston, "dirt is only good matter in the wrong place," the "teppista" may be regarded as good energy only misapplied, and, as the report of the Milanese "Croce Verde" shows us, may be brought to reinforce the army of order through discipline in the service of hygiene, physical and moral.

*Winter on the Great St. Bernard.*

The hospice still in requisition on this historic mountain has had to contend with exceptional difficulties during the past winter. Even 10 days ago (April 18th) a correspondent tells me that the ground adjacent to the hospice was still under four metres of snow—in some places as many as five metres. The quantity of the snow which has fallen from November to April as measured by the pluviometer amounted to nine metres on the Swiss side but to much less on the Italian. This severe weather notwithstanding, the number of wayfarers and working men who have sought and obtained shelter at the hospice has during the past six months been from 1200 to 1300, many of these cases demanding prompt and energetic restorative effort on the part of the monks. Thanks, however, to the experience, the skill, and the resources of these good men, no case of death occurred among those rescued or among the relief parties themselves. All the same, many of the "arrivals" at the hospice were found suffering from frost-bite of the hands and feet, principally in the month of

January when the thermometer registered 26° Centigrade below zero. These cases, it is gratifying to add, responded well to treatment and were "sent on their way rejoicing."

April 28th.

## VIENNA.

(FROM OUR OWN CORRESPONDENT.)

*Experiments on the Prevention of Cerebro-spinal Meningitis.*

THE epidemic of cerebro-spinal meningitis still continues on a small scale, but active and, as it is believed, sufficient measures have been instituted for its suppression by the recent regulations of the sanitary department. When a case has been notified all the members of the household are subjected to a procedure which, according to the experiments of Dr. Jehle, can be relied on for destroying the diplococcus meningitidis which is the special organism of the disease. The procedure consists in spraying a liquid containing "pyocyanase," a preparation of the bacillus pyocyaneus, into the naso-pharynx of the patient. It has been found that the number and the virulence of the diplococci obtained from infected nasal discharge were diminished by 50 per cent. within 24 hours after the application of the pyocyanase and that all the diplococci disappeared in from 48 to 60 hours. The same treatment has been recommended by the Government officials in the country hospitals and disinfection of all wearing apparel, bedding, and dwelling houses is done free of charge by the various municipal authorities. The number of cases reported since Jan. 1st is 112, with a mortality of 16 per cent., in spite of all modern means of treatment. In order not to increase the alarm felt by the public in regard to this disease the reports are not published in the newspapers.

*Adulteration of Food.*

The monthly report of the health officer of Vienna deals this time with some criminal proceedings instituted against certain "honest peasants" for adulterating food with substances injurious to the health of the consumer. Milk is one of the articles which is subjected very often to such treatment. In seven cases considerable quantities of milk from a large dairy were found to contain such additional ingredients as starch (in quantities varying from 5 to 12 per cent.) or even chalk. In a few other instances in which the milk contained numerous germs and micro-organisms the discovery was made that it was "augmented" with water from a certain spring supposed to be very beneficial on account of its composition, and bacteriological examination of the water from that spring showed the presence of numbers of micro-organisms. Meat was painted with rosanilin to give it a better appearance, and fresh-water fish, used here especially just before Easter, were treated by injections of air into the tissues to make them look plump. Sweetmeats were found in several instances coloured with anilin dyes and pigments containing lead. Cocoa powder and red pepper were adulterated with brick-dust, while flour and sago were frequently mixed with fine white sand to increase the weight. The strict supervision of the daily market for provisions has been in operation for only a few years but the results have been very satisfactory as regards the purity of the articles of food supplied to the inhabitants of the city.

*A Displaced Tooth in the Nasal Cavity causing Fœtid Vomiting.*

An unusual case of great diagnostic and anatomical interest was shown by Dr. Glas at one of the recent meetings of the Vienna Medical Society. The patient was a lad, 19 years of age, who when a child had once fallen violently on his nose. He complained of very fœtid eructation with occasional vomiting of green, foul smelling masses. The examination of the sputum, fæces, and a test breakfast gave no clue to the cause of this. In the nose, however, a curious condition of things was found. Between the left lower and the middle turbinated bone and the septum there were greenish-yellow, gangrenous, fœtid, friable masses, which indicated the presence of either a foreign body or an ulcerating neoplasm. After considerable difficulty and much bleeding a hard body was found and removed. This proved to be a canine tooth, which undoubtedly had been pressed into the nasal cavity by the fall already mentioned. The examination of the teeth of the patient showed the absence of the canine tooth, no interval existing between the first premolar and the lateral incisor of the left side. After removal of the rhinolith the fœtid vomiting ceased at once. The case is a great rarity, only two similar instances of displaced teeth forming rhinoliths having been recorded hitherto. In this patient the vomiting of the green masses was so difficult to explain that serious abdominal disease was suspected.

*A New Hospital for Lupus.*

The plans of a new hospital for lupus were a few days ago approved by the Minister of the Interior and the building will be finished in a short time. The present hospital for lupus, which has only 12 beds and four Finsen lamps, has for some time been unable to provide accommodation for the numerous patients who come from all parts of the empire seeking admission. The new hospital will have accommodation for 90 in-patients, a large out-patient room, 20 Finsen lamps and x ray apparatus, a surgical department, a research laboratory, and a pavilion with 40 rooms for the reception of out-patients who do not require to keep their beds but who on account of their disease are debarred from walking in the streets or public gardens. This "home," or "refuge" as it is called, will be connected with the large garden of the hospital so that the residents in the home will be able to obtain recreation and fresh air without mixing with other people. The expenses of this hospital for lupus are defrayed partly by the State and partly by voluntary contributions.

*Health of Vienna.*

A recent weekly report of the Board of Health shows an enormous increase of the infectious diseases, which have reached a level hitherto unattained since regular records were instituted. Measles and its complications were responsible for 68 deaths, whilst 312 new cases were notified. Scarlet fever was fatal in seven instances, whilst 73 new cases were reported. Typhoid fever and croup were each fatal in six cases. The general mortality was 21 per 1000, or 20 per cent. more than the yearly average. Not a single case of cholera, dysentery, or small-pox has been recognised during the last eight weeks. Pulmonary tuberculosis carried off 143 patients and neoplasms caused 63 deaths in one week. A sudden rise in the number of cases of erysipelas was noted but could not be traced to a definite cause; 37 fresh cases distributed throughout all parts of the city were reported and three of these were fatal. Pertussis was prevalent in the southern parts of the city, where 63 cases, with a mortality of 5 per cent., were reported. A comparison of the vital statistics for March with those for the corresponding weeks of the last five years is unfavourable for the present year, the morbidity being higher by 50 per cent. and the mortality by 25 per cent. Climatic reasons have been made use of to explain the facts. The barometric pressure has been low for many weeks and the amount of bright sunshine during April was so much less than in March that the virulence of the bacteria is supposed to be increased by these atmospheric conditions. Another very remarkable fact is the diminished incidence of cerebral hæmorrhage. It is pointed out in the report that the figure is extremely low, but no attempt is made to draw conclusions from the fact.

April 27th.

## BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

*The Annual Report of the Budapest City Hospitals.*

AMONG the varied contents of this highly interesting and scientifically compiled huge volume, I think that the following data are worthy of being brought to the notice of the English-reading medical public: 1. The results of serum therapeutics in the St. Ladislaus Hospital. Antidiphtheritic serum was applied in 494 cases. The percentage of recoveries was different in different months of the year and it seemed that it was the laryngeal complications which chiefly influenced the recovery-rate. Amongst all cases (494) there were 163 attended with laryngeal complications (i.e., 31 per cent.), and of the patients 47 (or 9·5 per cent.) died and 447 (or 90·5 per cent.) recovered. It is noteworthy that the author (Dr. Sigmund Gerlóczy, director of the hospital) states that the results would have been still better if

less neglected cases had come under skilled treatment. Thus among the 47 fatal cases there were 16 patients who died within 48 hours after admission to the hospital. Among the 163 patients with laryngeal stenosis 67 were intubated, of whom 41 (62 per cent.) recovered and 26 (38 per cent.) died. As for the time of the intubated condition it averaged 74½ hours in patients suffering from pure laryngeal croup, while in diphtheritic croup it averaged 53½ hours. In one case, however, the tube was kept in the larynx for 348 hours. It is advisable to administer the serum freely and as soon as possible after the onset of the illness. Thus several times there were injected from 10,000 to 14,000 immunity units in the case of children of one or two years of age. 2. Faulty or doubtful diagnoses in connexion with acute infective diseases. The correct and rapid diagnosis of acute infective diseases is important not only from the point of view of recovery but also from the social hygienic standpoint, in order to render isolation and the carrying out of prophylactic measures possible. If, for instance, a patient is admitted to a hospital with an erroneous diagnosis of scarlet fever he or she is at once placed amid scarlatinal patients. It may happen, however, that at the physician's visit the patient is found to be suffering not from scarlet fever but from measles. It is clear that such a patient not only exposes the others to the risk of contracting measles but is also liable to be infected with scarlet fever. This circumstance induced Dr. Gerlóczy to provide observation wards for all cases of infective disease where the patient is kept for 24 hours and after being thoroughly examined is ultimately sent to the proper ward. The frequency of erroneous diagnoses is shown by the fact that during the last two years the following cases were sent in as scarlet fever: 43 cases of angina, 13 of rubeola, 11 of eczema, eight of gastric catarrh, six of measles, six of erythema multiforme, six of erythema toxicum, four of urticaria, four of sudamina, three of stomatitis ulcerosa, three of bronchitis, three of croupous pneumonia, one each of lymphadenitis colli, erysipelas, syphilis, influenza, and pleurisy, and 16 persons not suffering from any illness. The following cases were sent with a diagnosis of measles: 22 of rubeola, eight of urticaria, six of tonsillitis, four of erythema multiforme, three of dyspepsia, three of pityriasis rosea, two of syphilis, and one each of sudamina, scarlet fever, bronchitis, eczema, erythema nodosum, and conjunctivitis phlyctenulosa; one person in good health was also sent. Other mistakes in diagnosis occurred in connexion with cases of diphtheria, diphtheritic croup, pertussis, varicella, modified small-pox, rubeola, epidemic cerebro-spinal meningitis, dysentery, and typhoid fever.

April 27th.

## CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

### *Gratuitous Treatment by Municipal Accoucheurs.*

IT has been decided to appoint accoucheurs for each municipal district whose duty it will be to render gratuitous treatment to poor women in confinement. These accoucheurs will be chosen by the authorities of the medical faculty of the Haidar-Pasha School of Medicine. Care will be taken to select skilful men and a medical inspector will be appointed to see that they conscientiously fulfil their obligations.

### *Exanthematous Diseases.*

All the schools in the suburb of Haskeuy on the left bank of the Golden Horn have been closed this week because of an outbreak of scarlet fever. The necessary measures for checking the epidemic have been taken, but several deaths from the disease have occurred.—From Smyrna I hear that small-pox is spreading in rather alarming proportions. Two causes account for this state of affairs. Firstly, the population, being ignorant of the advantages of vaccination, will not take their children to the public vaccinators; and, secondly, the latter themselves do not attach much importance to the vaccination laws and neglect their duties. The sanitary inspector of the vilayet of Smyrna has sent to Constantinople a memorandum urging the taking of immediate steps to enforce the vaccination laws throughout the whole province and the sending weekly of at least 300 tubes of calf lymph. It is intended to create a vaccination institute in Smyrna.

### *The Practices in the Slaughter-houses.*

Up to now there has existed in the metropolis a practice of killing animals in the slaughter-houses by night, with the result that the municipal veterinary surgeons were not present and so the state of health of the animals was not ascertained. The Superior Council of Hygiene has issued an order approved by Réchid Pasha, the prefect of Constantinople, enjoining that in future all slaughtering of animals is to take place during the day only. Any contravention will be severely punished. The butchers will now, it is earnestly hoped, not be able to sell to the public the meat of diseased or tuberculous animals.

### *Notes.*

Aidin is to be provided with canalisation works to enable the population of that town to have good drinkable water. The expenses will amount to 15,000 Turkish liras, which sum it is intended to raise by a surtax of 10 paras (a half-penny) on each quintal of goods imported and exported.—Mme. Takvor Pasha, the sister of the late Dr. Khorassandjian, has offered 12,000 Turkish liras to the Armenian Hospital of Constantinople.

April 26th.

## EGYPT.

(FROM OUR OWN CORRESPONDENT.)

### *The Water-supply of Egypt.*

Lord Cromer's annual report was dealt with recently in THE LANCET.[1] A postscript in the form of another Blue-book relates to the water-supply of Egypt. The huge dam at Assouan has been a profound success, and by holding up water in the winter months has enabled much new land in Lower Egypt to be brought under cultivation and has caused a considerable rise in the cotton crop, the value of which was estimated last year at £28,000,000. But the reservoir only supplies about one quarter of the water which is necessary for Egypt and the agriculturists have for a long time been demanding a further instalment. After mature deliberation the Egyptian Government has decided that none of the sites proposed for the building of the new dam is so suitable as the existing reservoir at the cataract of Assouan. It has therefore been decided to raise the existing dam some 23 feet at a cost of about £1,500,000. This is obviously a justifiable expense, for it will enable nearly 1,000,000 acres of land to be brought under cultivation and the value of the cotton crop alone in the area reclaimed will amount, it is calculated, to from £3,500,000 to £4,000,000. The work will take some five years and in the meantime the officials of the Irrigation Department will be able to decide what steps shall next be taken to store the waters of the Nile. Everyone agrees that it will be necessary, sooner or later, to prevent the present waste of water in the marshes south of Khartoum so as to insure an increased supply for the Soudan during the months of low Nile. It is still considered that it will be best in the future to devote the waters of the Blue Nile to the needs of the Soudan and those of the White Nile to the irrigation of Egypt. By raising the dam, as now decided, the storage of nearly two and a half times the present quantity of water in the reservoir becomes a simple engineering problem. It must be remembered that, although there is a modern water-supply for two or three of the largest towns, the rest of the inhabitants of Egypt drink water which is directly and daily drawn from the Nile or the canals which are its artificial tributaries. Everything, therefore, which is done to promote the volume of the water and the velocity of its flow helps to insure a purer drinking-supply during the time of low Nile. This is important during every summer, when diarrhœa and dysentery are liable to be prevalent, especially among children, and it becomes of the highest necessity on the occasions when the health of the community is menaced by cholera.

### *The Island of Philæ.*

The disappearance of the island of Philæ, except between the months of July and October, is necessarily a grief to all

[1] THE LANCET, April 20th, 1907, p. 1103.

lovers of the beautiful, but after some years of consideration it has now been decided that the present scheme is an absolute need for the well-being of Egypt and that the same benefits cannot be obtained in any other way. Sentiment must give way to practical utility and we must remain content with the knowledge that the antiquities of the island of Philæ, which owe their chief reputation not to archæological value but to the beauty of their picturesque surroundings, have been, at a cost of several thousand pounds, so consolidated by underpinning their foundations and carrying everywhere the masonry down to the solid rock that they are, though submerged, in a more stable condition than at any time of their past history and far safer even than the majority of the monuments in other parts of Egypt. It cannot, however, be suggested that the annual flood will have a beneficial effect upon their inscriptions except that it will wash away the deleterious salts which are ruining the stone work. Ample time is now afforded for the careful copying and recording of any inscriptions which may in future be inaccessible to the winter visitor to Egypt.

April 29th

## CANADA.

(FROM OUR OWN CORRESPONDENT.)

### *McGill University: Medical Buildings Burned.*

A FEW weeks ago the fine engineering building of McGill University, Montreal, was completely destroyed by fire. It had only been built some 13 years, and had been presented to the University by Sir William Macdonald, the millionaire tobacco manufacturer of that city. Now the ravages of fire have again visited the university, and this time the medical building has been destroyed. April 16th was the day of the conflagration. Amongst those who have suffered severe personal loss are Dr. F. J. Shepherd, Professor J. G. Adami, and Professor Ruttan. All of the first's anatomical materials are gone; Professor Adami has lost his valuable library which he kept in the building for the benefit of the students. At first it was thought that the manuscript of a new work on pathology, which he has been preparing for years, was also burnt but this has been saved. Many valuable pathological specimens, including the finest collection of calculi in America, have been destroyed, as well as the collection of brains made by Professor W. Osler when he was pathologist at the Montreal General Hospital. Professor Ruttan has also lost his library and all his chemical apparatus. The Medical Faculty of McGill University was the direct outcome of the old Montreal Medical Institution, which was organised as a medical school in 1823. In 1829 this Medical Institution was merged into the Medical Faculty of McGill University. The first university degree was a medical one and was conferred in 1833. During the Canadian Rebellion of 1836–39 there were no sessions held, which accounts for the fact that the present is the seventy-fifth session. In 1844 the number of students in the Medical Faculty was 50; in 1851, 64, with 15 graduates; in 1892–93, 315, with 46 graduates; in 1902 440 medical students were registered; and since that date the number annually has been about the same. In 1893 Lord Strathcona endowed the chairs of pathology and public health with $100,000. In 1899 Lord Strathcona again gave the Faculty $100,000 for extending and developing the laboratories, and a still further donation of $50,000 in 1904. The main building had been erected in 1873. In 1885 and again in 1893 large additions were made to it. It stood four storeys high except in the front block. Its total length was 280 feet and its width 145 feet. The belief is growing that the fire is of incendiary origin and an investigation is now proceeding.

### *Medical Inspection of Schools in Montreal.*

Dr. J. E. Laberge, the health officer of Montreal, has prepared a report which shows that 20,000 school children are affected with divers ailments in that city. The report is the outcome of the system of medical inspection of schools which has been carried on in Montreal for the six months ending March 31st, when inspection was stopped owing to lack of funds to pay the medical men engaged in the work. The report shows that the inspection is urgently required, that 1400 children are suffering from inflammation of glands of the neck, that 1022 have defective eyesight, that 9478 have defective teeth, that 2453 have enlarged tonsils, and that 1572 had vermin. So far as infectious diseases were concerned, that part of the work which probably appeals to parents more than anything else, five cases of diphtheria were found attending school, four of scarlet fever, 26 of measles, 19 of whooping-cough, five of mumps, and five of chickenpox. Then there were found of contagious skin diseases 46 cases of itch, 27 of impetigo, and 97 of ringworm; whilst 30 children had St. Vitus's dance, 104 had heart troubles, and 89 had lung troubles. The report is also interesting as regards the situation, ventilation, &c., of the schools. There were three schools with no ventilation at all. There were three situated in a basement, one in a garret, and three were found that only had their floors washed twice a year. One school had its floors washed once per annum, and yet another only once in two years. But in the face of all this Montreal has discontinued the medical inspection of schools.

### *Cremation in Montreal.*

The secretary's report read at the third annual meeting of the Crematorium, Limited, which was held recently in Montreal, gives some interesting figures of the growth of cremation in that city. Outside Montreal cremation is not practised in any part of Canada. From the commencement of operations in 1904 to April 2nd, 1906, there had been 33 cremations, to which are to be added for the year ending Feb. 28th, 1907, 19. Including the cremations performed under the charter of the Mount Royal Cemetery Company prior to the establishment of the crematorium, which numbered 12, there have been all told 64 cremations in Canada. It is said that in comparison with other cities outside Canada where cremation is carried on it is progressing favourably in Montreal.

### *The Death of Dr. William Henry Drummond, Montreal.*

By the death of Dr. W. H. Drummond Canada has lost one of her distinguished sons. Going to Cobalt, Ontario, the great silver mining centre of Canada, a few days before he died to investigate a reported epidemic of small-pox in his mining camp (his brother and he owned the Drummond Mine) he was stricken with paralysis, and although skilful friends in the medical profession in Montreal hurried away to his bedside he died on April 7th and was buried in Montreal. The late Dr. Drummond was a big, strong, athletic man, having been at one time champion three-mile runner of Canada, a good shot-putter, and an all-round athlete. He was born in Leitrim, Ireland, and was 52 years of age at his demise. A graduate of Bishop's College, Montreal, he rose to be professor of medical jurisprudence in his *alma mater;* he was at one time editor of the *Canada Medical Record*, now merged with the *Montreal Medical Journal;* but chiefly he became famous through his poems of French-Canadian farm-life, timbering, and boating. "The Habitant," "Johnny Corteau," "The Wreck of the *Julie Plante*," and "Old Dr. Fiset" will live in the history of this young country.

Toronto, April 19th.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

### *The "Thaw Murder Trial."*

FOR 12 weeks this community has been intensely disturbed by the various phases which this noted trial has assumed. To the medical profession it has had an especial interest owing to the large number of experts in insanity who were called on either side to determine the mental condition of the prisoner, not only at the time of the murder on June 17th, 1906, but at the time of the trial. With the citizens at large the interest centred in the character of the murderer and his victim, the former being the son of a lady of great wealth, and the latter one of the foremost architects of the country. The murder was committed at a fashionable public resort in the midst of its festivities and was witnessed by hundreds. The only question at issue was the plea of the defence—insanity. That plea was based on (1) heredity; and (2) a revolting story of assault by the architect upon a girl-actress to whom the defendant proposed marriage, the story being related in all its filthy details in court precisely as she related it to the defendant as a reason for declining his offer. The defence endeavoured to prove by its medical experts, seven in number,

that such a tale of cruelty inflicted upon the object of the defendant's love would so affect his unstable brain that years after he heard of the occurrence he would arm himself and deliberately kill the assailant, though the defendant himself travelled about Europe with this girl, living as man and wife, after learning of her downfall, and before they were lawfully married. While the defence aimed to prove insanity at the time of the murder it also aimed to prove that the defendant had meantime recovered and thus to prepare the way for his escaping both execution for his crime on the ground of insanity at the time the crime was committed and commitment to an asylum as a criminal afflicted with incurable insanity. The position was an exceedingly difficult one for a medical expert witness under cross-examination by an attorney as learned and resourceful as our prosecuting officer. They had abundant opportunities personally to examine the prisoner, a privilege denied to the half-dozen experts who appeared on the part of the prosecution. While the experts for the defence declared the prisoner insane when he committed the crime they refused to classify the form of insanity, but stated that he was subject to "brain storms," and the senior counsel of the defence invented the term "dementia Americana." The six experts on the part of the prosecution united in the opinion that the prisoner was suffering from paranoia and was incurable. This disagreement resulted in the appointment of a Commission in Lunacy, consisting of one physician and two lawyers, who were directed to determine whether the prisoner was insane at the time of the trial, and on its conclusion that he was sane at the time of their examination the case went to the jury, with the result that there was no agreement. This trial has proved exceedingly damaging to expert medical testimony. For three months 12 of the most prominent alienists of this country, divided into two camps of six each, have aided the attorneys of their respective sides, by private counsel and on the witness stand, in maintaining directly opposite opinions as to the mental condition of the prisoner. However honest and independent these alienists may have been in the formation of their opinions the public came to regard them as partisans, subsidised by enormous fees. To the lay mind, the adroitly evasive answers of the experts, their efforts at repartee with the attorneys, and their refusal to answer questions which would evidently impair the line of prosecution or defence, for which they were engaged, were satisfactory proofs that such testimony was not trustworthy. This public judgment of the untrustworthy character of medical expert testimony in the Thaw case strongly reinforces the growing prejudice in this country against medical expert testimony in all cases.

*A New Defence in Cases of Railroad Injuries.*

An interesting case was recently in the courts of the State of Texas. A woman, who was a "Christian Scientist," was injured in a railroad accident. She brought a suit against the company, alleging that she suffered severe pain as the result of the accident. The defence was that as she was a believer in "Christian Science," a religious faith which enables the believer to prevent pain in her person by the exercise of her will, her failure to employ her faith for her relief was contributory negligence. The lower court, in which the case was first tried, rejected this defence and the prosecution won a verdict for damages. On appeal the highest court of Texas reversed the decision of the first court and ordered a new trial on the ground that the plaintiff was in law bound to use proper measures for the relief of pain, and as she had implicit faith in "Christian Science," which taught that pain could be prevented by the exercise of the will of the sufferer, her failure to employ that remedy was negligence. It was required that in the re-trial the defence should be allowed to introduce evidence for the consideration of the jury relating to the plaintiff's faith in the "Christian Science" method of preventing and relieving pain.

*Vaccination in the Philippines.*

Dr. V. G. Heiser, chief United States quarantine officer of the Philippines, states that the systematic vaccination of the people has resulted in a very marked diminution of smallpox to a degree unknown for 300 years. During the quarter covered by the report the work of vaccinating the entire population of Cebu was completed, the first time in the history of the Philippines that the people of a province, numbering over three quarters of a million, have been vaccinated. Whenever the vaccination of a province is completed the work is followed up by vaccinating every six months all the children who have been born during that period and all unvaccinated persons who may have taken up their residence there during the interim.

*Law controlling Marriage in the Interests of Public Health.*

The Philadelphia County Medical Society recently passed a resolution expressing its approval of a Bill before the Pennsylvania legislature requiring certificates to the effect that both parties to a proposed marriage are, in the opinion of a qualified physician, free from disease transmissible to progeny. Similar measures are now before several State legislatures and in two or three instances they have been enacted into law and are now operative.

*A New Name for the Mosquito which communicates Yellow Fever.*

The Departments of Public Health and of Agriculture through the bureau of entomology, have adopted the name of "stegomyia calopus" as the name of the yellow fever mosquito. It has been known heretofore by several names, such as culex fasciatus, culex calopus, and stegomyia fasciata. More than a century ago the mosquito, now recognised as the species having the power of communicating yellow fever to the human subject, was classified as a culex, with the title of culex fasciatus, a name formerly given to an insect not identical with this one. The term culex calopus was adopted later, but with the classification of this mosquito with the genus stegomyia it is now proposed to give it the name, stegomyia calopus, by which it will hereafter be designated officially in this country.

April 19th.

## THE ROYAL ACADEMY EXHIBITION.

THE one hundred and thirty-ninth exhibition of the Royal Academy of Arts will be opened to the public on Monday next, May 6th, and the public will find in the beautiful galleries of Burlington House a show of average merit—that is to say, there is provided for their inspection a few good pictures, a great many pleasing works, and a certain number of canvases for the presence of which it is not easy to account. The accusation repeatedly brought against the Academy that the wall space is largely monopolised by the Academicians and Associates is not in the least borne out this year. To treat the outsider generously came into fashion at the exhibitions of the Royal Academy some ten years ago, and appears now to have grown into a custom. The day when the line of sight was monopolised in room after room by large replicas of the bygone exploits of Academicians is over, a reform which makes distinctly for the popularity of the exhibition, while showing the Academicians and the Associates to distinct advantage as artists.

In landscape the present exhibition is strong; there are good examples of every sort and the best work is the work of the old hands. The most likely to arrest attention are the poetic pictures of Mr. Alfred East, the simple but admirably executed pictures of Mr. Leader, the examples of their art sent by Mr. Joseph Farquharson, Mr. Peter Graham, Mr. J. MacWhirter, and Mr. David Murray, and the sun-flooded canvasses of Mr. Clausen and Mr. La Thangue. We do not always find it easy to believe in Mr. Clausen's prismatic sun-effects, but if his daring betrays him sometimes it enables him at others to achieve wonderful success. Mr. La Thangue's work is far more obvious, but exhibits just as accurate observation of the wonderful manner in which a flood of light may transmute the soberest objects into lines and masses of gorgeous colour.

Portraits on the whole are not so numerous, we think, as they have been of recent years, or is it that the comparative absence of the robes and uniforms belonging to various mayoralties, doctorates, and services are less in evidence? There is a sound little representation of the King by Mr. A. S. Cope, and a good portrait of Sir William Perkin by the same artist, the subject's life-work being effectively if naively indicated by his grasp of a mauve ribband; the Hon. John Collier's portrait of the late Sir Michael Foster is a dignified picture and an admirable likeness; Mr. Albert Collings sends a portrait of Lord Ampthill, which depicts that excellent administrator as nine feet high; Sir William Richmond exhibits an alert and dignified portrait of Miss Mary Robinson and

a most interesting presentation portrait of Mr. Arthur Evans the archæologist (this is to be hung in the Ashmolean Museum). Of several portraits by Mr. J. J. Shannon that of MRS. Tekelheimer will be most admired; Mr. George Henry adds to his laurels as a painter of beautiful women and has had great opportunities in his sitters; Mr. Christopher Williams sends a good likeness of Sir John Williams; Mr. Nowell is equally successful in a grave and quiet portrait of Herr Paul David, the well-known director of music at Uppingham School (a presentation portrait from old pupils); Mr. Harold Waite in a portrait of Mr. Justin McCarthy reproduces the almost painful facial contortions of presbyopia with fidelity, but sacrifices to that fidelity the grace of the picture; Mr. William Ranken's extremely clever portrait of Mrs. Brown Potter gives the well-known actress a *chevelure* of an almost impossibly daring red; Mr. Harris Brown's portrait of Sir Andrew Noble is a vigorous and thoughtful exploit; and Mr. Sargent continues to prove that he is the really great and original portrait painter of them all. Mr. Sargent is not so sensational or audacious as he has been on some occasions, but the easy mastery with which he paints, his psychological instinct, and his uncompromising candour are as well displayed as ever.

There is a notable absence of pictures telling any story or illustrating any episode of particularly medical interest. There are no sick-beds or ministering physicians and almost no nude anatomical studies. The natural colour of the healthy human being seems to be more widely recognised by the exhibitors this year, for the involuntary presentments of anæmia or jaundice, of which we have had formerly to complain, are practically absent. One painter, Mr. Sigismund Goetze, is determined to be in the van of the movement for stimulating the natural method of the feeding of infants. In a well-executed but banal allegory, entitled "Greatest of These," the central figure is a lady suckling a child of four, which is somewhat of a physiological exploit.

In the sculpture gallery there is an excellent bust by Mr. Hope Pinker of the late Sir John Burdon Sanderson.

## ASYLUM REPORTS.

*The Lancashire Inebriates Reformatory, Langho, near Blackburn (Third Annual Report of the Lancashire Inebriates Acts Board).*—At the beginning of 1906 there were 120 persons under treatment in this institution. During the year 36 were received, seven were released on licence, one was transferred to Aylesbury State Reformatory, and 14 were discharged on expiry of sentence. Although there were many "mental defectives" none have been certified as insane during the year. Only three persons have been committed under Section 1 of the Inebriates Act, 1898. Under this section any habitual drunkard who is convicted on indictment of any offence punishable with imprisonment may be committed to a reformatory, provided that the court is satisfied from the evidence that the offence was committed under the influence of drink or that drunkenness was a contributing cause of the offence. Dr. F. A. Gill considers that neither the cost of detention to the committing authority nor lack of accommodation can be advanced as a reason for the little use made of this section. Probably the chief reason is the necessity for the indictment to higher courts—a proceeding which involves delay and extra work. Dr. Gill believes that more cases of attempted suicide might be treated under this section with good results. He states that larceny, violence to the person or property, and cruelty to children are amongst the most common crimes, and perhaps the most important of these from our point is the last. The mothers generally do well after release and the benefit to their husbands and their children is incalculable. Under Section 2 of the Inebriates Act, 1898, any habitual inebriate who commits any offence mentioned in the first schedule of the Act—e.g., being found drunk in a public place, drunk and disorderly, &c.—and who within 12 months preceding the date of commission of the offence has been convicted summarily at least three times of any of the offences so mentioned, may be sentenced to detention in a reformatory. Any person charged with an offence against this section may refuse to be dealt with summarily and may then be committed for trial on indictment. Fewer cases have been committed under this section than in the two preceding years. The inmates are chiefly employed in laundry work, needlework, wood-chopping, and farm work of all kinds. Before leaving the reformatory on the expiry of sentence every woman is offered assistance through the medium of one of the various societies which have kindly offered to help in the important work of after-care. Dr. Gill reports that with the help of the above and the police he has endeavoured to keep in touch with all cases released, and so far as he can ascertain their conduct is as follows: seven doing well, five cannot be traced, eight have relapsed, and one has been convicted of crime but not for drunkenness. With regard to the discharges, several of them throughout their sentence showed the utmost indifference to their future welfare and would probably make little or no effort to keep sober when discharged. Nine showed quite obvious symptoms of mental defect and two are chronic invalids as well. Their previous convictions recorded an average of 22·8 each. Dr. Gill states that regarding the eight discharges who relapsed, it is a pity that their sentences were only for two years, as another year might have made all the difference between a cure and a failure. In order to show the mental state of those who have been under care in the reformatory since it was opened in 1904 Dr. Gill has drawn up a table which is well worthy of consideration. He shows that 2·3 per cent. were insane, 7·6 per cent. were very defective, 50 per cent. were defective, and only 39·7 per cent. were of average mental capacity. Thus the proportion of mental defectives to the total committed to the reformatory is over 60 per cent. Dr. Gill gives the following as the mental characteristics of the habitual drunkard: (1) an absolute disregard for truth; (2) delusion of persecution; (3) a sense of rectitude; and (4) lack of self-control. The medical director concludes his report by discussing some of the various remedies for the treatment of the habitual drunkard. Repeated short terms of imprisonment he considers to be worse than useless, for in a very large proportion of the cases the individuals are mentally defective. This fact is clearly demonstrated in the report of the medical inspector under the Inebriates Act, 1898, for last year, in which he gives the percentage of mentally defective as over 62 per cent. Dr. Gill states that these figures show up the true psychology of the police-court habitual drunkard with startling vividness and should be seriously considered by all who are so ready to denounce reformatories for their apparent futility as curative institutions. He welcomes the newer treatment in reformatories as scientific, humane, and rational, for it is now possible to sift the material and thereby to give the hopeful ones a chance and to protect the more degenerate. A life of idleness is not advocated, for they ought to contribute something towards their maintenance and this is better done under supervision and discipline than as free agents. Dr. Gill considers that more might be done to prevent the manufacture of drunkards by segregating the older habitual drunkards and so withdrawing their evil influence and example from corrupting others. Mental defectives are not naturally drunkards but have acquired the evil habit as the result of environment, and the pernicious element of which is the association with other drinkers. This is shown by the fact that there are few or no cases committed to the reformatory from rural districts. Now rural districts have a proportion of mental defectives as well as towns, but they do not seem to be manufactured into inebriates as they are in towns, the chief factor in this being probably the absence of vicious environment and example. The only remedy for the majority of the feeble-minded class of habitual drunkard is permanent detention and as the law stands at present this is impossible.

EAST-END MOTHERS' LYING-IN HOME.—The report for 1906 shows that this charity continues to do excellent work; 430 women were delivered in the home and in the out-patient district 458 women were attended at their confinements. Of 883 children born alive 11 died. There were two deaths of mothers in the home and none in the district. The number of out-patients attended shows a decrease from the last report, which is attributed to the poorer women being unable to meet the fee of 2*s.* 6*d.* charged on each letter. At present the total number of beds in the home is 22 and it is desired to collect funds to increase this accommodation. The annual meeting of governors will take place on May 9th, at 4.30 P.M., at 17, Cavendish-square, London, W., by kind permission of the Earl and Countess of Bessborough.

# Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation on April 25th the following degrees were conferred:—

*M.D.*—G. S. Haynes, King's; J. G. Slade, Clare; L. Bousfield, Pembroke; and G. W. de Poulton Nicholson, Jesus.
*M.R.*—W. S. Tresawna, Sidney Sussex; and J. M. P. Grell, Selwyn Hostel.
*B.C.*—W. L. Murphy, St. John's; W. S. Tresawna, Sidney Sussex; and J. M. P. Grell, Selwyn Hostel.

Dr. L. Cobbett, late Professor of Pathology in the University of Sheffield, has been appointed a University Lecturer in Pathology as from Lady Day, 1907, to Michaelmas, 1911.—Mr. Cuthbert S. Wallace and Mr. Raymond Johnson have been appointed additional Examiners in Surgery for the M.B., B.C., and M.C. degrees.—Dr. Harmer, Mr. W. Bateson, and Mr. A. E. Shipley have been appointed delegates of the University to the Seventh International Zoological Congress, Boston, August, 1907.—Dr. E. Barclay-Smith has been appointed an Examiner in Human Anatomy for medical degrees, in the place of Professor A. Macalister who is abroad.—The following have passed both parts of the Sanitary Science Examination and are entitled to the University Diploma in Public Health:—E. J. Brown, J. B. Cook, C. Fraser, F. H. G. Hutchinson, D. C. Kirkhope, C. H. Lindsay, D. McKail, P. MacKessack, J. S. New, W. G. Parker, J. C. Robertson, J. B. Smith, A. N. Stevens, F. E. Stokes, and T. M. Strang.

UNIVERSITY OF DURHAM.—At the Third Examination for the degree of Bachelor in Medicine held in April the following candidates satisfied the examiners:—

*Pathology, Medical Jurisprudence, Public Health, and Elementary Bacteriology.—First-class Honours:* Eldred Curwen Braithwaite, College of Medicine, Newcastle-upon-Tyne. *Pass List:* Leonard Foster Browne and Charles Ernest Lewis Burman, College of Medicine, Newcastle-upon-Tyne; John Everidge, King's College, London; Reginald Cyril Herbert Francis, College of Medicine, Newcastle-upon-Tyne, and Guy's Hospital; Arthur Charles Greene and Hedvig Christina Kellgren, College of Medicine, Newcastle-upon-Tyne; Raghunath Vithal Khedkar, L.R.C.P. & S. Edin., L.F.P.S.G., Grant College, Bombay; Herbert Richard McAleenan and Friederike Rahtkens, College of Medicine, Newcastle-upon-Tyne; and Eric Frushard Waddington, University of Leeds.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—In April the following candidates passed the undermentioned examinations:—

*First Examination.—Five Years' Course:* Tom Entwisle Ferguson, Bolton; Colin Hunter, Glasgow; Allan Ross Henry, Cape Colony; Hugh Francis Williams, Llanfyllin; Ishwar Das, Punjab, India; Patrick Walsh, Co. Limerick; John Scott, Dairy, Ayrshire; Charles Stuart Ogilvy, Blantyre; and William Woodburn M'Cowat, Transvaal.—*Four Years' Course:* Thomas Mitchell Jamieson, County Tyrone.
*Second Examination.—Five Years' Course:* David Lindsay Hutton, Glasgow (with distinction); Ernest Averell, Newcastle-on-Tyne; Robert Stobo Watt, Glasgow; Arthur Duncan Macarthur, Polloksheilds; Robert Miller Danks, Coatbridge; Michael Vincent Walsh, Cork; Hugh M'Ilroy, Co. Antrim; and Robert Anderson, Beith.
*Third Examination.*—Abraham David Woolf, Birmingham; Henry William Turner, Glasgow; John McCall, Ulverston, Tasmania; James Thomas Gwynne Jones, Brecon, Wales; Abdul Mujid Shah, Patiala, India; Ernest Gibson, Cork; David Welsh, Lanarkshire; Ishwar Das, Punjab, India; Archibald Davidson, Melbourne; Maurice Edward Kayton, Bagdad; and George Noel Braham, Bath.
*Final Examination and admitted Licentiates of the Three Cooperating Authorities.*—Shridhar Chintaman Jog, Edinburgh; Joseph Hume Patterson, Glasgow; Oliver David Gunasekara, Colombo, Ceylon; Fred Garnet Allan, Whaley Bridge, Cheshire; Hugh Ferguson Watson, Gartnavel, Glasgow; Edward Robert Harriott, Jamaica; Arthur Annesley Stork Kats, Ceylon; Effie Jemima Cassels, Glasgow; Charlotte Eliza Pring, Bristol; Phiroza Behranji Mufabari, Bombay; Emile Hamel Smith, Edinburgh; Frederick James Breakell, Glasgow; Malcolm Ross Slack, Canada; Hugh Graham Anderson, Newlands, Glasgow; Ada Geraldine Boyletter Diaz, Bombay; Hiralal Keshavlal Nanavati, Glasgow; Lennox Donald Napier, Egremont, Cheshire; and William Frederick Fismer Durr, Glasgow.

AT the meeting of the Portishead (Somerset) urban district council held on April 26th Dr. Charles A. Wigan was elected chairman.

MEDICAL MAGISTRATES.—The names of Mr. William Wilfred Williams, L.S.A., and Mr. James William Stephens, L.R.C.P. Lond., M.R.C.S. Eng., have been added to the commission of the peace for the county of Pembroke.

TIVERTON INFIRMARY.—The committee of the Tiverton (Devon) Infirmary has decided to enlarge the children's ward of the institution. Mr. J. Coles has presented a house adjoining the institution to be used as a nurses' home. He has also given £500 for the purpose of making necessary alterations which will be required in the building.

THE OLD INFIRMARY SITE, MANCHESTER.—As time goes on and the new infirmary in Oxford-road, Manchester, advances towards completion the destiny of the old site in Piccadilly becomes more interesting and the various views concerning it are expressed more warmly. Some would like every scrap of building removed and the whole area preserved as an open space. Others would keep the present buildings, adapting them, so far as possible, to serve as an art gallery and free library. Another small party would build about 250 shops on the ground floor of a building the upper part of which would serve for the art gallery and free library. These various schemes do not seem to have attracted any very large amount of public enthusiasm. The first is held to be only attainable at too great a cost. The present building is thought by many to be too heavy and dark readily to be made suitable for the display of works of art. The addition of 250 shops to those that already provide amply for the needs of Manchester is not looked for very eagerly by the shopkeepers of Market-street, King-street, Oldham-street, &c., who are struggling under heavy rents and heavy rates. It is said that there are not 250 shops in Market-street and King-street together, so that the addition of 250 more, for which there seems neither need nor room, would if successful swamp many old-established businesses, while if unsuccessful they would go far towards ruining this ambitious scheme. This question seems to have led to the formation of a new "Society of Friends of Art" in Manchester, which held a meeting on April 17th, at which Professor Boyd Dawkins moved a proposition approving the suggestion of the art gallery committee to widen their scope and to build an art gallery and free library on the infirmary site. The gallery would illustrate not only painting but various branches of art and would, in fact, be a museum as well as a picture gallery. There would be ample room for the building and a considerable open space round it. The motion was carried unanimously. On the whole the trend of opinion, so far as it can be ascertained, is in the direction of the last scheme.

PRECAUTIONS AGAINST PLAGUE IN CALCUTTA.—The special health officer of Calcutta, Dr. T. Frederick Pearse, recently issued some simple precautions to the community against the spread of plague. The principal points to which attention is directed are: avoid sleeping on the bare ground at night, do not touch dead rats with the hands, avoid eating grain in which dead rats have been found, kill all rats and mice on premises, avoid the breath and discharges of plague patients, ventilate rooms well, and wash clothing and expose all clothes and bedding to sunshine regularly. The employers of labour and medical practitioners are enjoined to report persons suffering from ailments which in any way suggest plague infection.

FRENCH MEDICAL EXCURSION TO CENTRAL EUROPE.—A French medical excursion party (*voyage d'enseignement médical*), "Excursions Médicales Internationales, 1907," will visit several cities in Central Europe between August 7th and 23rd. The party will assemble at Nancy and will proceed to Stuttgart, Munich, Nuremberg, Carlsbad, Marienbad, Prague, Vienna, Budapest, Salzburg, Gastein, Innsbruck, Zürich, and Baden in Switzerland. The party will separate at Besançon-la-Mouillère. The programme and conditions of the excursion will be published at an early date. Inquiries, inclosing a postage stamp for reply, may be addressed to the *administrateur* of the society, M. Etienne Bazot, 8, Rue Françoise-Millet, Paris 16.

DONATIONS AND BEQUESTS.—By the will of Mr. John Thomson of Tunbridge Wells the following hospitals each receive £1000: General Hospital, Tunbridge Wells, St. Bartholomew's, Guy's, London, King's College, St. George's, Charing Cross, Middlesex, University College, Brompton Cancer, St. Thomas's, Royal Free, Great Northern Central, and West London Hospitals, National Hospital for the Paralysed and Epileptic, Royal London Ophthalmic Hospital, Moorfields, Hospital for Consumption and Diseases of the Chest, Ventnor, Brompton Consumption Hospital, Hospital for Sick Children, Great Ormond-street, Victoria Hospital for Children, Chelsea, and Royal Hospital for Incurables, Putney. The Earlswood Asylum for Idiots and the City of

London Hospital for Diseases of the Chest each receive £500. The ultimate residue of his estate is to be distributed amongst the Westminster, Guy's, and St. Mary's Hospitals, London, the General Hospital, Tunbridge Wells, and the Glasgow Royal Infirmary. The estate is valued at £119,508.

KING'S COLLEGE (UNIVERSITY OF LONDON).—The forty-seventh annual dinner of King's College, London, will be held at the Hotel Cecil on Monday, May 27th. The Bishop of St. Albans will be in the chair.

AMERICAN MEDICAL ASSOCIATION.—Mr. Herbert J. Paterson, F.R.C.S.Eng., is to give an address before the Surgical Section of the American Medical Association, which will meet at Atlantic City during the first week in June. The subject is, "The Operation of Gastro-jejunostomy and its Physiological Effects."

CROWNHILL CONVALESCENT HOME.—The annual meeting of the subscribers to the Crownhill Convalescent Home, near Plymouth, was held on April 25th. The medical report stated that during 1906 the in-patients numbered 279, compared with 317 in 1905. The financial statement was satisfactory and showed a favourable balance of £18.

PRESENTATION TO A MEDICAL PRACTITIONER.—At Treherbert, last week, the miners of the Fernhill, Blaenrhondda, and Bute Collieries, presented Mr. William Cathcart Hinde, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., with a clock, a set of cutlery, and an address as a mark of respect and esteem.

NATIONAL SANATORIUM, BENENDEN.—Princess Christian on April 30th formally inaugurated the completed portion of the National Sanatorium at Benenden, near Cranbrook, Kent, erected by the National Association for the Establishment and Maintenance of Sanatoria for Workers suffering from Tuberculosis. A description of the ceremony and the building will be published in a future issue of THE LANCET.

ROYAL DEVON AND EXETER HOSPITAL.—At the quarterly meeting of the governors of the Royal Devon and Exeter Hospital, held on April 25th, it was reported that there was an adverse balance against the institution of £1392, being £866 more than for the corresponding period of last year. The chairman (Sir Duckworth King) remarked that unless more support was forthcoming the committee would have to sell some more funded stock.

CERTIFICATES UNDER THE WORKMEN'S COMPENSATION ACT.—At a meeting of the Newbury and District Medical Society held on April 25th the following resolutions were proposed, seconded, and carried *nemine contradicente* and the honorary secretary was directed to forward a copy for publication to THE LANCET and the *British Medical Journal*, and also to every member of the society who was not present at the meeting.

*Resolution 1.*—That this meeting is of opinion that the certificates issued under the Workman's Compensation Act by any insurance company, which are required to be filled in at the expense of the injured workman and stating the probable duration of disablement, should not be signed by any member of this society.

*Resolution 2.*—That no certificate be filled up on behalf of the employer under the above Act for a less fee than one guinea.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

*Notification of Births Bill.*

THE Bill to provide for the early notification of births, which Lord ROBERT CECIL has introduced into the House of Commons to deal with the problem of infantile mortality, has the support of Mr. LYTTELTON, Mr. SHACKLETON, Mr. VERNEY, Mr. GULLAND, Mr. MASTERMAN, Mr. SHERWELL, and Mr. TENNANT. It has been printed and the text of its operative clause is as follows:—

(1) In the case of every child born after the first day of January, 1908, it shall be the duty of the father of the child, if he is actually residing in the house where the birth takes place at the time of its occurrence, or in his absence of any person in attendance upon the mother at the time of the birth or within six hours thereafter, to send or give notice of the birth to the medical officer of the district in which the child is born within 48 hours after such birth.

(2) It shall be sufficient compliance with this section if notice be sent by prepaid letter or postcard addressed to the medical officer.

(3) It shall be the duty of all rural and urban sanitary authorities to bring the provisions of this Act to the attention of all medical practitioners and midwives practising in their district.

(4) Any person who fails to give or send notice of a birth in accordance with this section shall be guilty of an offence and shall be liable on summary conviction to a penalty not exceeding twenty shillings.

(5) The notification required to be made under this Act shall be in addition to and not in substitution for the requirements of any Act relating to the registration of births.

(6) This section shall apply to stillborn children as well as to children born alive.

*Public Health Officers Bill.*

Three members of the House of Commons, Mr. ARTHUR BLACK, Mr. HARMOOD-BANNER, and Mr. A. H. SCOTT, have given notice that they will move the rejection of the Public Health Officers Bill when the second reading of the measure is moved.

*Opposed Bills.*

The second reading of the Pharmacy Bill is to be opposed by Mr. BARKER and Mr. DUCKWORTH, whilst Mr. RADFORD has given notice that he will move the rejection of the Sale of Whisky Bill.

*The Butter and Margarine Bill.*

Sir EDWARD STRACHEY, who represents the Board of Agriculture in the House of Commons, has, as already stated in THE LANCET, moved the second reading of the Butter and Margarine Bill, which deals with the limit of moisture in butter and butter substitutes. Some of the Irish Members take exception to provisions in the Bill which will affect the Irish butter trade. Both Mr. WILLIAM REDMOND and Mr. JOYCE have given notice of an identical motion on this point, which will be moved as an amendment to the motion for the second reading before the debate terminates. It is in the following terms: "That, whilst it is highly desirable and necessary to legislate to secure proper regulations for the sale of butter, it is not expedient to interfere in any way with Irish salt firkin butter, for which there is a steady market and which is an important industry for large numbers of farmers in Ireland."

*The Vaccination Bill.*

Mr. JOHN BURNS on Tuesday presented a Bill to substitute a statutory declaration for the certificate required under Section 2 of the Vaccination Act, 1898, of conscientious objection. It was read a first time.

The text of Mr. BURNS's Vaccination Bill was issued on Wednesday. Its clauses are as follows:—

Clause 1.—The Vaccination Act, 1898, shall be read as if the following section were substituted for Section 2 of that Act:—

(1) No parent or other person shall be liable to any penalty under Section 29 or Section 31 of the Vaccination Act, 1867, if within four months from the birth of the child he makes a statutory declaration that he conscientiously believes that vaccination would be prejudicial to the health of the child and within seven days thereafter delivers the declaration to the vaccination officer of the district.

(2) A statutory declaration made for the purposes of this section shall be exempt from Stamp Duty.

(3) A statutory declaration for the purposes of this section shall be made in the form set out in the schedule to this Act, or in a form to the like effect.

Clause 2.—Section 2 of the Vaccination Act, 1898, is hereby repealed, but the repeal shall not effect the operation of any certificate obtained before *the passing of this Act.*

Clause 3.—(1) This Act shall come into operation on *the first day of January nineteen hundred and eight.*

(2) This Act may be cited as the Vaccination Act, 1907, and may be cited with the Vaccination Acts, 1867 to 1898.

The form of declaration required to be signed by the parent or person having the custody of a child, which is given in the schedule, sets forth that he shall "solemnly and sincerely declare that he conscientiously believes that vaccination would be prejudicial to the health of the child, and he makes this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declarations Act, 1835."

## HOUSE OF LORDS.

THURSDAY, APRIL 25TH.

*Necrosis in Match Factories.*

The Earl of LYTTON called attention to the death from necrosis recently reported from the factory of the Messrs. Moreland. He asked the noble lord representing the Home Office in the House whether, in view of the fact that phosphorus poisoning could not be prevented by the special regulations at present in force, His Majesty's Government would reconsider its attitude towards the Berne Convention prohibiting the use of yellow phosphorus in matches. The noble earl in putting the question mentioned that six European States—France, Germany, Italy, Holland, Denmark, and Switzerland—had signed the Berne Convention prohibiting the manufacture, importation, or use within their territories of matches made with the dangerous white or yellow phosphorus. Every kind of match which the public could require

could be made without the use of this dangerous kind of phosphorus. The British Government, although it claimed to have the interests of the industrial classes at heart, would not join the other nations in their efforts to stamp out necrosis. However, it said that it would only join in the Convention on condition that every nation which imported matches did the same. The special regulations of the Home Office on this subject were not a sufficient protection. Since they came into force five cases of phosphorus poisoning had occurred in this country.

Earl BEAUCHAMP, on behalf of the Home Office, said that in 1900, when there was a good deal of discussion upon the question of phosphorus poisoning, the Secretary of State for the Home Department, instead of prohibiting the use of phosphorus in this country, caused special rules to be made and the memoranda which had been laid before Parliament showed that these rules had had very satisfactory results. There had only been five cases of necrosis in the five years during which these special rules had been in force. Three of these cases had been mild and the persons affected had recovered and were able to find other employment. The other two cases were fatal. As regarded the case to which the noble earl specifically referred to, it was probable that the disease was contracted before the special rules were made, because he was informed that necrosis lurked in the the body for a considerable period before making its appearance. The man had worked in a match factory for 12 years and it was very probable that he had caught the disease, which was of an insidious character, before the new rules came into operation. It would not be fair, therefore, to regard the case as being in any way due to a defect in these rules. The Government was of opinion that the special rules had been successful and it proposed to adhere to the position. The Home Secretary, however, had in contemplation amendments which were specially designed to meet such a case as the noble earl had brought to the notice of their lordships. Special arrangements would have to be made in regard to dental examination and the Home Secretary proposed to frame a rule to prohibit tobacco chewing, which was said by doctors to have a bad effect upon persons who worked in match factories.

MONDAY, APRIL 29TH.

*Prohibition of Medical Practice by Companies Bill.*

Lord HYLTON moved the second reading of the Prohibition of Medical Practice by Companies Bill. He said that he hoped to be able to convince their lordships of the necessity for legislation of the character proposed in the Bill. He would remind them that the Medical Acts of 1858 to 1886 provided in effect that only persons who were legally qualified by having passed prescribed qualifying examinations and by being registered in the Medical Register could lawfully practise medicine, surgery, and midwifery throughout the United Kingdom. It had been, unfortunately, true that what was illegal for one man to do himself as a physician or surgeon, it was legal for him to do if he joined unto himself five or six or seven other unqualified persons. It seemed a scandalous state of things that such should be possible; but unfortunately the General Medical Council, who were the body whose duty it was under the Privy Council to administer these Acts, had found themselves unable to stop these practices, and, in fact, they were widely spread. From a document furnished to him by the General Medical Council it appeared that the incorporation of these bogus medical and dental companies went on steadily and a good many of them had been registered since the matter was last brought before Parliament. He found that a circular had been widely distributed by a firm of company registration agents in which it was urged that unqualified men who wanted to act as doctors and dentists should avail themselves of the incorporation of companies as a means by which the prohibition imposed by the Medical Acts might be entirely avoided, this prohibition being described by them as onerous. He had been furnished by the General Medical Council with a long list of these bogus companies, and many of them were not included in the return to the House of Commons moved by Sir John Tuke. Some of these bogus companies had done great evil and the great object of the Bill was to protect the poorer classes of the community who were deceived by these sham companies. If these companies could be dealt with by the law and could be prosecuted it would be found that they would at once go into liquidation. The examination of the list of shareholders of the sham companies at Somerset House had revealed the fact that there were very few shareholders indeed, and only sufficient shareholders were taken into the companies to permit of them being formed. Their lordships might wonder why legislation had not taken place to protect the public and to prevent lives being sacrificed by these companies. The General Medical Council were not to blame in this matter. They had endeavoured to induce successive Governments to take up this matter and to initiate legislation. In 1900 Lord Halsbury put two clauses into his Companies Bill of that year and these would effectually have put a stop to these evils. These clauses were accepted by their Lordships' House. The Bill then went down to the House of Commons. Unfortunately for the views of the General Medical Council and others who took an interest in the matter, the clauses were struck out for the reason that they were not germane to a Companies Bill. He did not speak with any authority on that point, but the representatives of the medical profession in the House of Commons without exception, such as Sir Walter Foster and Sir John Tuke, and other Members, such as Mr. Bryce, begged the Government of the day not to take these clauses out of the Companies Bill. However, the month was August. Both Houses of Parliament were, as they usually were at that season of the year, anxious to get business through, and in order to prevent any opposition taking place to the Companies Bill the two clauses were struck out of it and in this condition it was passed. The general view of the medical profession was that something should be done to deal with this evil of practice by bogus companies. Since the Act of 1900 the General Medical Council had not been idle in this matter, but they had been unable to induce any of the Governments to take it up. Now, after H.M. Government had been approached it was suggested that a private Member like himself should bring in this Bill.

The Earl of HALSBURY supported the Bill. His lordship, who was indistinctly heard, was understood to say that the clauses dealing with medical companies had not been persisted in in the Bill of 1900, because with them it would have been hopeless to have attempted to pass the Bill. He had received an enormous amount of literature from the medical profession which showed that the law had been deliberately evaded by people turning themselves into a company. This was a very facile means of evading what the legislature had deliberately laid down with regard to the qualifications of medical men.

The Earl of CREWE, who spoke on behalf of the Government, said that the two noble lords had given the past history of this matter, which was by no means unimportant matter. He thought that what happened in 1899 was that the noble earl began by introducing a Bill dealing with this subject only, and then it was thought better to attempt to incorporate the substance of that Bill in the Companies Bill of the following year. When the two clauses in that Bill dealing with medical companies went to the House of Commons they met with the fate that had been described. He believed as a matter of fact that it was the friends of the noble earl himself who got them struck out. It was satisfactory that Lord Hylton had brought the subject before their lordships. His Bill in the opinion of the Government met something which nearly approached a public scandal—namely, the possibility of the evasion by unqualified persons of the law relating to medical practice. It was important to point out that in one respect the Bill contained a drastic provision. Not only did it interfere with the proceedings of unqualified people, but it also prevented the formation of a company which would employ fully qualified doctors to act for them. That was a strong decision. However, he thought that it was possible to justify it when they remembered that the relations of doctor and patient were so confidential that the weight of them ought to rest upon each doctor individually and he ought not to be able to shelter himself behind the name of a company. He further thought that it would be generally agreed that the kind of man who would be employed by a company would be one of the derelicts of his profession and it would be as well not to encourage the kind of practice which would take place if such companies were allowed to be formed. He understood that Lord Hylton was quite willing that this Bill should be referred to a Select Committee. If that course were followed the Government would fully concur in it. It was no doubt important that they should seek to avoid all hardship to individuals, and they desired to avoid any suspicion that they were dealing hardly with the kind of practice which obtained amongst the very poor. It was desirable that the matter should be thoroughly threshed out before a Select Committee. He hoped therefore that their lordships would agree to the second reading and allow this course to be followed.

The motion for the second reading was then agreed to.

Lord HYLTON then moved that the Bill should be sent to a Select Committee.

This course was also agreed to.

*Dental Companies (Restriction of Practice) Bill.*

Lord HYLTON then moved the second reading of the Dental Companies (Restriction of Practice) Bill. He said that this Bill was almost on all fours with the preceding Bill dealing with medical practice. He did not know whether it was proper to deal with both subjects in one Bill or in two. The General Medical Council thought, however, that two Bills should be brought in. There was a difference in the two Bills. This Bill did not propose to make it illegal for a company to practise dentistry provided that its members were registered dentists.

The Earl of CREWE said that this Bill was complementary to the other with the addition mentioned by the noble lord. He thought that this case was different from the one of the doctor. The dentist remained in his own torture chamber and generally did not visit the domestic circle of his patient. This provision did not apply to the doctor.

The Bill was then read a second time and was referred to the same Select Committee as should deal with the Prohibition of Medical Practice by Companies Bill.

## HOUSE OF COMMONS.

WEDNESDAY, APRIL 24TH.

*The Ballina Dispensary.*

Mr LONSDALE asked the Chief Secretary to the Lord Lieutenant of Ireland what action had been taken by the Local Government Board in regard to the appointment of Dr. Clarke as temporary medical officer to the local dispensary district, having regard to the fact that the Ballina board of guardians made it a condition of his appointment that he should use his influence to induce his uncle to relinquish his tenancy on the Crannagh farm.—Mr. BIRRELL replied: The Local Government Board has sanctioned Dr. Clarke's appointment as temporary medical officer of the Ballina dispensary district. No facts came to the knowledge of the Board which would justify it in withholding its sanction.

*Medicine for the Edenderry Union.*

Mr. LONSDALE asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that when advertising for tenders for the supply of medicines and surgical appliances the guardians of the Edenderry Union stipulated that the envelopes should be marked on the outside from Irish firms; that out of many tenders sent in only four were marked as directed, and only those four were opened and considered; whether this device was resorted to because the guardians had been warned by the Local Government Board that recoupment would not be made in any case where the guardians did not accept the lowest tender received by them; and whether, having regard to the fact that the practice of the Edenderry guardians was being recommended for adoption by other boards with the avowed object of boycotting English firms, the Local Government Board proposed taking any action in the matter.—Mr. BIRRELL replied: The facts are correctly stated in the first two parts of the question. The regulations provide that recoupment from the Local Taxation Account will not be allowed in any case in which the guardians accept a tender other than the lowest without the approval of the Local Government Board. The Board does not consider that the contracts in this case have been entered into in accordance with the regulations and it intends, therefore, to disallow recoupment to the guardians in respect of the cost of any medicines or appliances obtained under such contracts.

*Typhoid Fever in Clare Lunatic Asylum.*

Mr. HALPIN asked the President of the Board of Trade whether he would inquire into the cause of delay in not returning plans of sewerage from the Clare lunatic asylum to the inspectors of lunatics in order that the sanction of the Lord Lieutenant should be obtained to carry out the works, those plans having been forwarded to the Board of Trade eight months ago; and whether he was aware that a serious

epidemic of typhoid fever broke out at the asylum owing to the alleged defective sewerage, by which several of the patients lost their lives, and that the sanction of the Board of Trade became necessary owing to the fact that the sewers were to be carried over a small stream subject to tidal influence that ran dry in the summer season and that the principal owner and occupier of the adjacent lands gave his sanction to the project months ago.—Mr. LLOYD GEORGE (in a written answer) replied: The first communication in this matter from the Dublin Office of Lunatic Asylums was received in August last, but it was not until October that the necessary plans were forwarded to the Board, who, in the same month, gave instructions for the application to be advertised. The Lunatic Asylums Office, however, demurred to the newspapers prescribed by the Board for the advertisement, with the result that proofs of the advertisement were only received on Jan. 5th last. On receipt of these proofs the owners of the property adjacent to the site of the proposed works were at once consulted by the Board of Trade, but one of them, though written to more than once, neglected to reply, thus causing delay. The Board of Trade has now informed the inspectors of Lunatic Asylums that they are prepared to consent to the works on certain conditions. I have no information as to the matter referred to in the last part of the question.

*Dispensary Doctors in Ireland.*

Answering Mr. THOMAS O'DONNEL, who asked a series of questions bearing on the amounts paid to dispensary doctors in Ireland, Mr. BIRRELL wrote: The total amount of the salaries of dispensary medical officers in the year 1897 came to £90,727, of which one-half was recouped from the Parliamentary Grant. It would not be possible to state with accuracy the actual credit given to each county in respect of the salaries of dispensary medical officers. In the year ended March, 1906, the salaries of medical officers, together with the payments for services of temporary medical officers, came to £110,134, of which it may be taken that somewhat less than one-half was recouped from the Local Taxation Account. The exact amount of recoupment cannot be given owing to the limitation imposed by section 6 (1) of the Local Government Act of 1902. The salaries of medical officers are paid according to unions, and the unions are not in all cases coterminous with the counties. The present number of unions extending beyond county limits is 46, but there were more than this number in 1897, and no sectional valuations are available for the purpose in that year, so that a comparative statement could not be arrived at.

THURSDAY, APRIL 25TH.

*The Irish University Scheme.*

Answering Viscount TURNOUR,

Mr. BIRRELL said that he had received protests against proceeding with the Irish University scheme upon the lines laid down by the late Chief Secretary to the Lord Lieutenant for Ireland from the Senate of the University of Dublin; resident members of the University of Oxford; principals and professors of the Scottish universities, of the University of Sheffield, the constituent colleges of the University of Wales, and of St. David's College, Lampeter; and from lecturers in the School of Medicine of the Royal Colleges, Edinburgh. So far as English and Scottish university opinion was expressed in these protests it was mainly confined to that part of the proposal which related to a federated university.

*Pulmonary Tuberculosis in Belfast Mills.*

Mr. DEVLIN asked the Secretary of State for the Home Department whether his attention had been called to the high death rate in Belfast from pulmonary consumption and to the fact that the death-rate was highest among mill and factory workers, the vast majority of whom were females; whether there was any female factory inspector in Belfast; and, if not, whether, in view of the number of women and young girls employed in mills and factories in Belfast, he would consider the advisability of appointing a female inspector for that city and the North of Ireland generally.—Mr. GLADSTONE answered: The figures given in the report of the Registrar-General for Ireland for the year 1905 do not appear to me to show any necessary connexion between the deaths in Belfast from tuberculous disease and employment in the linen factories. I may point out that the conditions obtaining in the flax and linen mills have been made the subject of a special inquiry by Sir Hamilton Freer-Smith and that as a result new regulations for the industry have just been established dealing with the removal of dust, wet, &c., which should do much to improve the health of the workers. I shall be glad to send the honourable Member a copy. With regard to the last part of the question, one of the lady inspectors resides in Belfast for two-thirds of each year, devoting her time chiefly to inspection in the city. Others of the lady inspectors also visit Ireland occasionally.

*Lead Poisoning in Royal Dockyards.*

Mr. BRAMSDON asked the Secretary to the Admiralty to state how many cases of lead poisoning had been treated by the surgeons of Portsmouth, Devonport, Chatham, Sheerness, and Pembroke dockyards respectively during the year 1906.—Mr. EDMUND ROBERTSON replied (by written answer): The following is the number of cases of lead poisoning treated during the year 1906:—Portsmouth, 7; Devonport, 3; Keyham, 2; Chatham, 2; Sheerness, *nil*; and Pembroke, 2.

*Cerebro-spinal Fever and Old Clothes.*

Mr. SLOAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to a resolution passed by the Downpatrick rural district council against Belfast dealers displaying goods for sale on fair days in that town on the pretence that it was done to avoid the spread of spotted fever; and whether, in view of the fact that the Downpatrick council gave no evidence to support its contention and the fact that dealers from Belfast had been injured in their business he would call upon the council to justify its resolution or withdraw it.—Mr. BIRRELL furnished the following written reply: The Downpatrick town commissioners passed a resolution requesting the Downpatrick rural district council to take steps to prevent old clothes from being brought for sale into the town. The district council thereupon inquired from the Local Government Board whether it had power to comply with the request and was informed in reply that the Board was not aware of any enactment giving such power except in the case of infected articles. I have no authority to do what the honourable Member suggests.

*Poor-law Children.*

In answer to Mr. W. H. B. PRIESTLEY, Mr. JOHN BURNS wrote: On Jan. 1st, 1907, the numbers of pauper children relieved in workhouse infirmaries in England and Wales were as follows:—

| — | Number of children chargeable to Poor-law unions in London. | Number of children chargeable to Poor-law unions outside London. | Total. |
|---|---|---|---|
| (a) Not including insane and idiots— | | | |
| (1) In workhouses, otherwise than in infirm wards .. ... | 1,046 | 13,630 | 14,676 |
| (2) In infirm wards or infirmaries ... ... | 2,045 | 4,645 | 6,690 |
| (b) Insane and idiots in workhouses* ... ... ... | 14 | 302 | 316 |
| | 3,105 | 18,577 | 21,682 |

* There were also 132 children chargeable to London unions in district sick asylums and 797 children in the imbecile asylums belonging to the managers of the Metropolitan Asylum District.

The number of children over three years of age chargeable to Poor law unions in London in the workhouses on Jan. 5th last was 446 and in infirmaries 1004. Similar information with regard to the rest of England and Wales is not available.

MONDAY, APRIL 29TH.

*The Royal Commission on the Feeble-minded.*

In answer to Lord ROBERT CECIL, Sir HENRY CAMPBELL-BANNERMAN said: I am informed by the chairman of the Royal Commission on the Care and Control of the Feeble-minded that the evidence has just been closed and that the report will be presented at the earliest possible moment, but how soon this would be it was impossible to say.

*The Royal College of Physicians of London and the Plague.*

Dr. RUTHERFORD asked the Secretary of State for India what action had been taken by the Government in regard to a deputation of the Royal College of Physicians in May, 1905, to the Secretary of State for India pointing out the danger of the plague and recommending certain measures to be taken; and whether he would lay upon the table the memorandum of the College of Physicians.—Mr. MORLEY furnished the following written answer: Some delay which I regret has occurred in this matter. The memorandum reached India at a time when the Government of India had called for and were awaiting reports by the local governments on the subject of plague remedies, based on the personal experience of their officers. These reports, which were very voluminous, were dealt with in a published resolution by the Government of India of Jan. 17th, 1906, laying down in detail a complete policy for dealing with plague. This policy in its preventive features is in practical accordance with the memorandum of the Royal College of Physicians. The Government of India have since considered, in communication with the local governments, the recommendations of the memorandum for a special medical organisation for dealing with plague. Their scheme has not yet been definitely formulated, but I understand that the sanitary service will be strengthened by employing a larger number of qualified natives of India. I shall be happy to lay the memorandum on the table if my honourable friend will move for it.

*The Vaccination Order.*

Mr. LUPTON asked the President of the Local Government Board whether he would state the reasons for delay in issuing the Vaccination Order which on Feb. 14th he stated in the House was to be circulated in a few days; and whether he would name a day by which the Order in question might be expected to appear.—Mr BURNS replied (by a written answer): Some questions of difficulty have arisen in settling the details of the Order which have delayed its issue. These will, I hope, be very shortly surmounted and the Order will then be issued.

TUESDAY, APRIL 30TH.

*Calico and Blood Poisoning.*

Mr. SUMMERBELL asked the Secretary of State for the Home Department whether he was yet in a position to report the results of his investigations in regard to the death of Ann Wilson at Sunderland through blood poisoning, alleged to have been set up through the dressing used by manufacturers in the making of calico.—Mr. GLADSTONE answered: I obtained a piece of the calico and had it subjected to analysis by an expert, who after various experiments reported that it was free from pathogenic organisms, the organisms found being common contaminations of any material which is exposed to air.

*Small-pox in Germany.*

Mr. LUPTON asked the President of the Local Government Board whether, in view of the epidemic of small-pox in Germany and the probable derivation of vaccine from variolous matter in that country, he would take steps to prohibit the importation of vaccine from the continent into England during such time as the epidemic may continue.—Mr. JOHN BURNS said in reply: I have no information as to there being an epidemic of small-pox in Germany, although I am aware that there has been some prevalence of the disease on the frontier at Metz. I have no authority to prohibit the importation of lymph from the continent, and I may add that I understand that any vaccine of variolous origin which is current in Germany and which is liable to be imported into this country would have been frequently passed through the calf.

*Public Health Inspection in Scotland.*

Mr. WATT asked the Secretary for Scotland whether he would grant a return of the number of local authorities who had, and of those who had not appointed veterinary surgeons to carry out the provisions contained in Sections 43 and 60 of the Public Health (Scotland) Act, 1897, and in Article 3 of the Dairies, Cowsheds, and Milkshops' Order of 1899.—Mr. SINCLAIR replied: I am informed that all the burghal and 97 out

of a total number of 107 county authorities have approved the employment of veterinary surgeons for the purpose of Section 43 of the Public Health Scotland Act, 1897.

*The Medical Officer to the Tokio Embassy.*

Sir WILLIAM COLLINS asked the Secretary of State for Foreign Affairs whether an appointment to the medical officership to the British Embassy at Tokio was made in the early part of this year; if so, whether the vacancy was advertised; whether the gentleman appointed was a British subject; and, if not, whether he held any medical qualification recognised as registrable by the General Medical Council.—Sir EDWARD GREY (by written answer) replied: There was no vacancy. The medical adviser to His Majesty's Embassy proceeded on leave and made arrangements for a competent substitute to act during his absence.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week such information for gratuitous publication.*

BERTRAM-HILL, W., M.B. Manch., has been appointed House Surgeon at the Hospital for Women and Children, Leeds.

FINZI, NEVILLE S., M.B. Lond., M.R.C.S., L.R.C.P., L.S.A., has been appointed Medical Officer in Charge of the Electrical Department, Metropolitan Hospital, N.E.

FISHER, H. R., M.B. Cantab., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Fillongley District of the county of Warwick.

GRIMBLY, RICHARD HENRY, M.R.C.S., L.S.A., has been appointed Medical Officer for the Ippledon District by the Newton Abbot (Devon) Board of Guardians.

HAMMER, JOHN D., M.B., Ch.B. Edin., has been appointed House Surgeon at the Royal Devon and Exeter Hospital, Exeter.

HINGSTON, CHARLES ALBERT, M.D., B.Sc. Lond., M.R.C.S., has been re-appointed Honorary Physician to the Crownhill Convalescent Home, near Plymouth.

HOWELL, ALFRED, M.D. Lond., has been appointed Honorary Assistant Physician to the Cardiff Infirmary.

KELLAS, ARTHUR, M.B., Ch.B., D.P.H. Aberd., has been appointed Resident Medical Officer at the Aberdeen Sick Children's Hospital.

LEWIS, W. J., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Ystalyfera District of the counties of Brecknock and Glamorgan.

MCELWAINE, THOMAS, L.R.C.S. & P. Edin., L.F.P.S. Glasg., has been appointed Police Surgeon for the Borough of Devonport.

RUDGE, FREDERICK HENRY, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon at the Torbay Hospital, Torquay.

SHARP, ALEXANDER D., M.D. Brux., F.R.C.S. Edin., has been appointed Consulting Surgeon for Diseases of the Ear, Nose, and Throat at Noble's Isle of Man Hospital.

STEWART, J., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Beith District of the county of Ayr.

TAYLOR, A. E., M.B., M.S. Edin., has been appointed Honorary Physician to the Cardiff Infirmary.

WEBB, H. GORDON, M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon at the Tottenham Hospital.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

AYRSHIRE, CUNINGHAME COMBINATION POORHOUSE.—Medical Superintendent. Salary £300 per annum, with house, fuel, light, &c.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100.

BRIDGWATER HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—House Physician, unmarried. Salary £80 per annum, with board, residence, and washing.

BURY ST EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and lodging.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon.

CARMARTHEN, JOINT COUNTIES LUNATIC ASYLUM.—Medical Superintendent. Salary £450 per annum, with house, fire, light, and washing. Also Assistant Medical Officer. Salary £200 per annum, with board, lodging, washing, and attendance.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £80 a year, with board, apartments, and laundress.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park E. Physician to Out-patients.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon for six months. Salary £60 per annum, with rooms, board, washing, and attendance.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—House Physician, House Surgeon, and Assistant House Surgeon. Salary of two former £80 and of latter £70 per annum, with board, residence, and washing.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

GLOUCESTER, GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Surgeon. Also Assistant House Surgeon for six months. Salary at rate of £30 per annum, with board, residence, and washing.

GUY'S HOSPITAL DENTAL SCHOOL.—Travelling Scholarship. Value £100.

HARTSHILL, STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL.—House Physician. Salary £100 per annum, with apartments, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £30, with board and residence.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50, with board and lodging.

IPSWICH, EAST SUFFOLK AND IPSWICH HOSPITAL.—Third House Surgeon. Salary £50.

LEEDS GENERAL INFIRMARY.—House Physician for six months.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board and residence.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon and Anæsthetist, unmarried. Salary £50, with board, lodging, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Surgeon. Also Assistant Surgeon.

MILLER HOSPITAL, Greenwich-road, S.E.—Junior House Surgeon. Salary at rate of £50 per annum, with board, attendance, and washing.

NATIONAL DENTAL HOSPITAL AND COLLEGE, Great Portland-street, W.—Anæsthetist.

NORTHAMPTON, BERRY WOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150, increasing to £200, with board, lodging, washing, and attendance.

OLDHAM UNION.—Resident Medical Officer, unmarried. Salary £120 per annum, with residence, coal, gas, rations, washing, and attendance.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon to the Eye Department.

ROCHDALE INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

ROYAL EAR HOSPITAL, Dean-street, Soho, W.—House Surgeon for six months. Salary at rate of £40 per annum.

ROYAL NAVY MEDICAL DEPARTMENT.—Examination of Candidates for Entry.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Physician-Accoucheur, Assistant Surgeon, and Assistant Aural Surgeon.

ST. MARY'S HOSPITAL, Paddington, W.—Physician-in-Charge of Out-Patients.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75 per annum.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon. Salary £70 a year, with board, lodging, and washing.

WADSLEY, NEAR SHEFFIELD, WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary £140, rising to £160, with board, &c.

WALSALL AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £50 per annum, with board, residence, and washing.

WANDSWORTH UNION INFIRMARY, St. John's Hill, near Clapham Junction.—Junior Assistant Medical Officer, unmarried. Salary at rate of £100 a year, with board, lodging, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon, unmarried. Salary £50 per annum, with board, residence, and washing. Also House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, &c., 73, Welbeck-street, London, W.—Resident House Physician and Medical Registrar. Salary at rate of 50 guineas per annum, with board, washing, and attendance.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Officer-in-Charge of X-Ray Department.

WINCHESTER, ROYAL HANTS COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £65, rising to £75, with board, residence, &c. Also Honorary Physician in Ordinary.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Bromyard, in the county of Hereford.

# Births, Marriages, and Deaths.

## BIRTHS.

FAWCETT.—On April 25th, at 66, Wimpole-street, W., the wife of John Fawcett, M.D., of a son.

GAMAN.—On April 26th, at Caistor House, Caistor, Lincolnshire, the wife of F. R. S. Gaman, M.R.C.S., L.R.C.P., of a daughter.

VISGER.—On April 3rd, 1907, at Elm Lodge, Clevedon, the wife of Charles Visger, M.R.C.S., of a daughter.

## MARRIAGE.

GAYNER—HEYCOCK.—On April 25th, at Great St. Mary's Church, Cambridge, Francis Gayner, M.A., M.R.C.S., L.R.C.P., to Emily Bertha, elder daughter of Charles T. Heycock, F.R.S., Fellow of King's College, Cambridge.

## DEATHS.

HUGHES.—On April 24th, at Bronwendon, Penmaenmawr, North Wales, in his 82nd year, Robert Hughes, M.D.

SKERRITT.—On April 29th, at Ivor House, Durdham Park, Clifton, Bristol, Edward Markham Skerritt, M.D., F.R.C.P., Senior Physician to the Bristol General Hospital, aged 58.

WILSON.—On April 26th, at Denham House, Goldhawk-road, London, W., Enid May, aged two years, youngest daughter of James Wilson, M.D.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## QUOTATIONS FROM THE LANCET.

WE are constantly having to protest against the way in which the proprietors of certain preparations misuse statements which have appeared in these columns. One of the worst offenders is the Vitæ Ore Company, Limited. Some years ago—namely, on March 25th, 1899—we analysed a sample of Vitæ Ore and mentioned that it contained 13·20 per cent. of ferric and 3·9 of ferrous sulphate. We ended our notice by saying, "The clinical results obtained were satisfactory, but the preparation showed no superiority over Blaud's pills or other remedies used in the treatment of anæmia." The Vitæ Ore Company took this paragraph and extracted from it the six words, "The clinical results obtained were satisfactory," and these words they are constantly quoting in advertisements of the most blatant kind. A correspondent who is a Baptist minister has forwarded to us an advertisement from the *Baptist Times* in which the Vitæ Ore Company states that its preparation is "the most wonderful discovery of modern times for the successful treatment of ailments caused by a weak or diseased condition of the Stomach, Liver, Kidneys, or Blood, such as anæmia, rheumatism, dyspepsia, eczema, stone, hæmorrhage, wounds, sore-throat, tonsillitis, brain fag, &c." The six words above mentioned are quoted from us. We have no hesitation in saying that this quotation is a gross instance of misquotation. It implies that we recommended Vitæ Ore for the various diseases mentioned in the advertisement, a distinctly misleading implication. We have had upon a previous occasion—namely, in THE LANCET of Jan. 13th, 1906—to point out the misuse made of this quotation. We now charge the Vitæ Ore Company with deliberately using a portion of our statement with intent to deceive the public.

## MEDICAL FEES.

*To the Editors of* THE LANCET.

SIRS,—In a recent article in the *Semaine Médicale* a passage is quoted from the work of Dr. Charles Floquet, "Code Pratique des Honoraires Médicaux," to the effect that it is the custom in England for a medical man to receive on his first visit twice the amount of his fee. On subsequent visits a single fee only is paid and when the patient wishes to signify that the doctor need not return he simply omits to pay and so the attendance comes to an end. As this *cliché* seems to recur every time that an article is written in a French medical periodical on the question of fees in foreign countries and is evidently an article of faith, you would render a service by publishing this letter together with your answer stating what truth there is in this legend and which would, no doubt, be reproduced by the French medical papers.

I am, Sirs, yours faithfully,

April 27th, 1907. FOLK LORE.

*** It is very usual for a "consultant" to charge £2 2*s.* for the first visit and £1 1*s.* for subsequent visits within a reasonable time. The two guineas, however, is the usual fee and not "twice the amount." The statement as to the method of signifying a desire that the attendance should end is, of course, nonsense.—ED. L.

## WORKHOUSE MEDICAL OFFICERS AND THEIR DUTIES.

A CORRESPONDENT who applied for particulars of the appointment of assistant medical officer at the Swansea Union Workhouse received a paper setting out the duties of the assistant medical officer and a notice of the vacancy. From this we learn that the assistant medical officer must be resident and that as no accommodation for residence is at present provided he shall reside within 250 yards of the workhouse and be paid £80 per annum for, we presume, lodging money. His salary is £120 per annum, to include fees for certifying lunatics, extra medical fees, and fees for lectures. He shall also be appointed public vaccinator for the workhouse at the minimum fees. The duties are by no means light. Amongst others he is to accompany the medical officer in his visits to the patients and to carry out all the orders which he may give. He is to examine all children in the workhouse every other day or oftener if required. He is to observe that the nurses and attendants are attentive to their duties and to report them if necessary. He is to give weekly lectures to the nurses, to keep the infirmary medical records, to write out special reports of cases when required to do so, to examine all wards of the infirmary twice every day, and to perform any other duties in the infirmary that may be required of him by the medical officer. If he leaves the workhouse or his residence for more than three hours he must inform the master. He must attend every workhouse visiting committee and must provide at his own expense a qualified practitioner to act as substitute during his absence from the institution, except during his annual holiday of two weeks when the guardians pay for his substitute. There are many other duties, and it seems to us that such heavy and responsible duties are not sufficiently remunerated by a salary of £200 a year in the case of a member of a liberal profession. The comfort of the post would of course largely depend upon the character of the medical officer and the master of the workhouse, to both of whom the assistant medical officer appears to be practically subordinate.

## THE SPREAD OF INFECTION.

ON April 24th a man named William Lloyd of Lisbon-street Dwellings, Bethnal Green, was summoned by the Bethnal Green Borough Council at Old-street for failure to give notice to the sanitary authority that one of his children was suffering from scarlet fever. The evidence showed that Lloyd's wife took her two-year-old child to Mr. Snell of Bethnal Green who told her that the little patient was suffering from scarlet fever and diphtheria. The woman gave a false address and on the sanitary authority being notified the case could not be traced at first. Some days later, however, the parents were traced and the child was found very ill in a room used by other children. Mrs. Lloyd admitted that two of her children went from home every day to Somerford-street public school, while two other girls, aged 18 years and 16 years respectively, went to work in a factory. The husband refused to have the child removed to hospital and said that if it had to go he would carry it through the streets himself. He could only be prevented from doing this by being told that he would be liable for exposing the child. He was fined 40*s.* and 2*s.* costs, but he chose to go to prison in default. This case shows very well the difficulty which the sanitary authorities have among a certain class of people in dealing with infectious disease. Mr. Margetts, who appeared for the borough council, said that poor people thought it was an indignity for the ambulance to call at their house and we fear that this is very often the case. Anything connected with municipal or parish relief other than hard cash is anathema to the poor and their very ignorance prevents them from seeing that to behave in the manner in which Mr. and Mrs. Lloyd did on this occasion is a danger not only to themselves but to their neighbours.

## LONDON MEDICAL UNION.

*To the Editors of* THE LANCET.

SIRS,—It may be of interest to your readers to learn how the above society proposes to solve an ethical dispute between certain of its members. At a meeting of the council of the union the following resolution was passed after considerable discussion:—

"That in the case of a surgeon to a club or other similar body being asked to give an opinion to the club or other body about a patient known to be under treatment by another practitioner, the surgeon should insist on inspecting the certificate given by the medical attendant, and if not able to endorse it he should privately communicate with the medical attendant before giving an opinion."

I am, Sirs, yours faithfully,

A. F. SHOYER,

April 30th, 1907. Hon. Sec., London Medical Union.

## CHILDREN'S SIGHT AND SPECTACLES.

IN THE LANCET of April 13th we commented on a letter from an optician named Dunscombe which had appeared in the *Western Daily Press*. Mr. Dunscombe now asks us to publish the whole of his letter and we do so.

## BRISTOL EYE HOSPITAL.

SIR,—There is in the report of the excellent work done by the Bristol Eye Hospital, submitted to the subscribers at the annual meeting yesterday, a paragraph laying great stress upon the large amount of time spent by the Eye Hospital staff in testing the sight of school children, of which the committee would like to see the staff relieved, to enable them to deal more particularly with cases of disease in the eyes and with operations. This expression of opinion by such an authority is of great public importance, as showing the real work for which the institution is established. None of the work complained of need go to the Hospital; it is the work of the optician, and Bristol has qualified opticians capable of testing and correcting defects of vision, who would send all cases of disease and abnormality to the Hospital, or an oculist, according to the circumstances of the person, and thus enable the institution to fulfil its functions with even greater efficiency than at present.

Yours truly,

March 28th, 1907. M. W. DUNSCOMBE.

We still do not consider Mr. Dunscombe or any other optician as capable of diagnosing diseases of the eye.

## THE METROPOLITAN WATER BOARD AND ITS PROPOSED MEDICAL OFFICERS.

*To the Editors of* THE LANCET.

SIRS,—I inclose a letter I have received from the Metropolitan Water Board upon which, as a matter of interest to medical men, I should like to have your opinion. Is it possible that a public body expects a medical man to examine properly one of their employees and give a certificate, presumably in confirmation or otherwise of the employee's own medical attendant's opinion, and perhaps have to travel two or three miles to do this, for half-a-crown? Personally I have declined it on the ground that I could not do justice to the Board upon such terms. Considering that there is no question of charity here surely this is worse than the half-guinea for an examination for life insurance, of which we rightly complain as being so grossly unfair.

I am, Sirs, yours faithfully,

April 15th, 1907. M.B. LONDON.

*** The letter in question states that the Board proposed to appoint

district medical officers for the purpose of medically examining members of the staff absent on account of ill-health. The conditions laid down by the Board for acceptance by the medical man, supposing that he is appointed, are as follows:—

> "That the district medical officers be paid a fee of 2*s.* 6*d.* for each examination, it being understood that, whenever practicable, the person requiring a certificate should attend at the doctor's residence, and that if this is impracticable the doctor should make an examination at the employee's own residence."

We do not understand why the employee, if ill, could not furnish a certificate which would be satisfactory to the Board from his own medical man. For such certificate the Board should pay, say, 5*s.*—ED. L.

### A NEW CORSET.

WE have had sent to us for inspection a specimen of a new corset to which the deviser has given the ambitious name of the Health Unbreakable Corset. The special feature of this invention is the replacement of the usual steel busks by leather supports at the sides, while the front busk is lined with leather. We have received a favourable report of the corsets from a wearer to whom we gave our sample and who submitted it to a practical trial for a month. The corset is stated to be "more comfortable than any previously worn, gives greater freedom during exercise and work, and none of the busks have broken." There is not any particularly medical feature about the invention, but no medical man is ignorant of the advantages that a good-fitting, pliable, and comfortable corset offers to his female patients. As a rule, the cheap corset does not possess the necessary qualities; its pressures are rigidly and badly distributed, its structure causes it both to wear out easily and to lacerate contiguous garments; and æsthetic charms are absent. Mrs. O'Leary, 4, Cotham-street, Walworth, S.E., seems to us to be able to supply the public at a reasonable figure with a useful article, for, although as much as 5 guineas can be spent upon the Health Unbreakable Corset, 8*s.* will purchase the humbler makes. The leather in the corsets while quite new may seem a little stiff, but just as new boots in a short space of time accommodate themselves to the feet, so the leather busks accommodate themselves to the wearer's ribs. The use of leather in this way will be a double saving of expense—the corsets should last longer and so should the underclothes worn next to them.

### BOOK CANVASSERS.

*To the Editors of* THE LANCET.

SIRS,—In the *British Medical Journal* of April 20th, p. 963, there appears a paragraph under heading "Book Canvassers." This was inserted at my instigation in the hopes that the medical profession might be placed upon their guard against the firm in question and more so against signing their names to documents permitting a specimen copy to be sent to them. I was astonished to receive the book in question and immediately returned it (within an hour) by registered post. Nevertheless, I was sued and have this morning had to pay £5 5*s.* for the book (which is valueless to me) and £2 17*s.* 3*d.* costs. I am writing in the sincere hopes that you may feel justified in warning all your readers, but especially *county* ones, for I understand *each county will be canvassed* in rotation.—I am, Sirs, yours faithfully,

April 30th, 1907. COLLINGWOOD FENWICK.

### THE THERMOS FLASK.

A FEW simple practical experiments suffice to show the number of useful purposes which the Thermos flask can serve. We are not told in what way the flask is so perfectly insulated that it virtually keeps liquids hot for 24 hours or iced liquids cold for weeks, but such is the fact. Tea made in the early morning and placed in this flask is quite hot enough to drink in the afternoon. Liquid food placed in the Thermos flask before retiring to rest will keep its temperature throughout the night. In 24 hours we found that water placed in the flask at an initial temperature of 180° F. fell to 114·8°. The average fall of temperature over 24 hours was thus about 2·7 degrees per hour. The depreciation of temperature is most rapid during the first few hours, the fall later being hardly two degrees per hour. It is unnecessary to point out what a number of useful applications there are to which this ingenious device may be put, ministering, as it can be made to do, to so many domestic comforts. For travellers, cyclists, railway passengers, invalids, nurses, and so forth, this invention will come as a real blessing. The specimen flask with which we made our experiments was submitted to us by Messrs. Lawson, Ward, and Gammage, of 5, Hatton-garden, London, E.C.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

**During the week marked copies of the following newspapers have been received.**—*Wigan Examiner, Daily Dispatch (Manchester), Birmingham Herald, Morning Leader, Daily Telegraph, Morning Post, Standard, Daily Mail, Daily News, Tribune, Manchester Courier, Coventry Standard, Aberdeen Gazette, Birmingham Gazette, Liverpool Echo, St. Pancras Gazette, Sheffield Evening Telegraph, Sheffield Daily Telegraph, Newcastle Daily Journal, &c.*

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, May 2nd, 1907.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rainfall. | Solar Radiation Vacuo. | Maximum Temp. Shade. | Min. Temp. | Wet Bulb. | Dry Bulb. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| April 26 | 30·07 | S. | 0·31 | 51 | 45 | 44 | 43 | 44 | Raining |
| ,, 27 | 29·85 | E. | 0·36 | 102 | 51 | 36 | 37 | 40 | Fine |
| ,, 28 | 29·85 | N. | 0·02 | 97 | 53 | 40 | 41 | 45 | Cloudy |
| ,, 29 | 29·75 | N.W. | 0·09 | 81 | 55 | 41 | 46 | 49 | Cloudy |
| ,, 30 | 29·68 | W. | — | 55 | 54 | 42 | 43 | 45 | Raining |
| May 1 | 29·76 | N.W. | 0·25 | 69 | 52 | 41 | 41 | 43 | Raining |
| ,, 2 | 29·36 | W. | 0·10 | 106 | 54 | 42 | 47 | 51 | Cloudy |

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY (6th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

**TUESDAY (7th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

**WEDNESDAY (8th).**—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.).

**THURSDAY (9th).**—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

**FRIDAY (10th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

**SATURDAY (11th).**—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**TUESDAY (7th).**—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M.: Papers:—Prof. A. S. Grünbaum: A Case of Inoculated Syphilis in the Chimpanzee.—Dr. F. A. Bainbridge and Dr. P. R. Parkinson: The Morbid Histology of the Suprarenal Glands.—Dr. W. O. Meek: A Rare Variety of Cardiac Degeneration.

**WEDNESDAY (8th).**—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M.: Meeting.

**THURSDAY (9th).**—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—3 P.M.: Paper:—Dr. A. E. Giles: Observations on the Surgical Treatment of Inflammatory Diseases of the Uterine Appendages based on a Series of 120 Cases.

HARVEIAN SOCIETY OF LONDON (Hospital for Paralysed and Epileptic, Maida Vale, N.W.).—8.30 P.M.: Clinical Evening. Cases will be shown by Dr. L. Guthrie, Dr. W. T. Harris, Dr. C. Singer, and others.

**FRIDAY (10th).**—BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—4.30 P.M.: Cases and Specimens.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—Papers:—Mr. Sherren: Gastro-enterostomy for Chronic Gastric Ulcer; Healing of Ulcer Verified at Post-mortem Examination 23 months later.—Dr. H. French and Dr. M. G. Louisson: Upon the Extent to which Widal's Reaction persists after Recovery from Typhoid Fever.—Dr. L. Guthrie and Dr. W. d'E. Emery: Precocious Obesity and Hirsuties with Hypernephrosis.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY (6th).**—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—2 P.M.: Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Lecture:—Prof. W. Wright: The Prehisteric and Early Historic Inhabitants of England (with lantern slides).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. J. H. Sequeira: Clinique. (Skin.) 5.15 P.M.: Lecture:—Mr. J. Sherren: Remarks on the Surgery of the Brachial Plexus.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—9.30 A.M.: Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Medical Out-patient (Dr. Whipham), Throat, Nose, and Ear (Mr. Carson); X Ray (Dr. Pirie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Sir Dyce Duckworth: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. StClair Thomson: Diseases of the Throat, Nose, and Ear. 2.15 P.M.: Special Lecture:—Sir Dyce Duckworth: Treatment of Cardiac Dilatation.

**TUESDAY (7th).**—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. J. Taylor: Clinique. (Medical.) 5.15 P.M.: Lecture:—Sir W. R. Gowers: The Diagnosis and Treatment of Sudden Cerebral Lesions.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—10 30 A.M.: Medical Out-patient (Dr. Auld). 2.30 P.M.: Gynæcological Out-patient (Dr. Giles), Surgical Out-patient (Mr. Edmunds). Surgical Operations (Mr. Carson).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. R. T. Hewlett: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin.

CENERAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—3.45 P.M.: Demonstration:—Dr. Abercrombie: Nose and Accessory Sinuses.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Lecture:—Dr. Batten: Cerebro-spinal Meningitis.

**WEDNESDAY (8th).**—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Lecture:—Prof. W. Wright: The Prehistoric and Early Historic Inhabitants of England (with lantern slides).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street W.C.).—4 P.M.: Mr. P. L. Daniel: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. J. Horne: Foreign Bodies in the Ear, Gullet, and Air Passages.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—2.30 P.M.: Skin (Dr. Meechan), Eye (Mr. Brooks), Medical Out-patient (Dr. Whipham).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. F. Taylor: Medicine. 2.30 P.M.: Operations. 3.30 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye. 3.30 P.M.: Special Lecture:—Mr. Cargill: Treatment of Ocular Injuries.

**THURSDAY (9th).**—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Cliniques. (Surgical.) 5.15 P.M.: Lecture:—Dr. R. Hutchison: Mucous Colitis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—2.30 P.M.: Gynæcological Operations (Dr. Giles). Cliniques:—Medical Out-patient (Dr. Whiting), Surgical Out patient (Mr. Carson). 3 P.M.: Medical In-patient (Dr. Chappel). 4.30 P.M.: Demonstration of Medical Cases (Dr. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Mr. M. Davidson: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat. 3.15 P.M.: Special Lecture:—Sir W. Bennett: Some Points in the Radical Cure of Hernia.

CHARING CROSS HOSPITAL.—4 P.M.: Mr. Wallis: Demonstration (Surgical). (Post-Graduate Course.)

**FRIDAY (10th).**—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. X Rays. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Lecture:—Prof. W. Wright: The Prehistoric and Early Historic Inhabitants of England (with lantern slides).

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NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Lecture:—Dr. Batten: Acute Ataxia.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—3 45 P.M.: Demonstration.

**SATURDAY (11th).**—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

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